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REPORT
ON THE
SANITARY ADMINISTRATION OF THE PUNJAB
AND
PROCEEDINGS OF THE SANITARY BOARD
FOR THE YEAR 1917


BY
COLONEL H. HENDLEY, K.H.S., M.D., I.M.S.,
Sanitary Commissioner, Punjab,

AND
THE REPORT ON SANITARY WORKS FOR 1917

BY
MR. A. R. ASTBURY,
Sanitary Engineer, Punjab.



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Section II.—European Army.

No remarks.

Section III.—Native Army.

No remarks.

Section IV.—Jails.

No remarks.

Section VII.—Vaccination.

(Separate report.)

Section VIII.—Sanitary Works, Military.

No remarks.

(The text of the Sanitary Report is limited to 20 pages and that of the Sanitary Engineer to 4 pages.)

TABLE OF CONTENTS.

Para.	Subject.	Page.
SECTION I.—METEOROLOGICAL.		
1	Chief Meteorological feature	1
2	Price of food-grains	<i>ib.</i>
3	Wages of labour	<i>ib.</i>
SECTION V.—VITAL STATISTICS.		
4	Population	2
5	General summary	<i>ib.</i>
6	Births. Annual Form No. I	<i>ib.</i>
7	Birth-rates of other provinces	<i>ib.</i>
8	Birth-rate in large towns	<i>ib.</i>
9	Highest and lowest birth-rates. Annual Form No. I	3
10	Excess of births over deaths. Annual Form No. I	<i>ib.</i>
11	Deaths. Annual Form No. II	<i>ib.</i>
12	Death-rates in other provinces	<i>ib.</i>
13	Deaths by districts. Annual Form No. II	<i>ib.</i>
14	Seasonal mortality. Annual Form No. III	<i>ib.</i>
15	Death-rates according to different diseases under specified age periods— Annual Form No. IV	4
16	Deaths by classes. Annual Form No. V	<i>ib.</i>
17	Deaths in towns and rural circles. Annual Form No. VI A and B	<i>ib.</i>
18	Inspection of birth and death registers	<i>ib.</i>
19	Births and deaths among employés at railway stations	<i>ib.</i>
20	Births and deaths among Europeans and Anglo-Indians	5
21	Births and deaths among the non-military population of cantonments. Appendix to Annual Form No. VI B	<i>ib.</i>
SECTION VI.—CHIEF DISEASES.		
22	Cholera. Annual Form No. VII... ..	6
23	Small-pox. Annual Form No. VIII	8
24	Plague	9
25	Fevers. Annual Form No. IX	10
26	Dysentery and Diarrhœa. Annual Form No. X	12
27	Respiratory diseases. Annual Form No. XI	<i>ib.</i>
28	Injuries. Annual Form No. II	<i>ib.</i>
29	All other causes. Annual Form No. II	<i>ib.</i>
30	Rabies	<i>ib.</i>
SECTION IX.—SANITARY WORKS.		
31	Sanitary Works	13
32	Sanitary note-books	<i>ib.</i>
33	Rewards for sanitation	<i>ib.</i>
34	Cleaning of wells and construction of parapets	<i>ib.</i>
35	Sale of street sweepings	<i>ib.</i>
36	Land under sewage irrigation	<i>ib.</i>
37	Village sanitation	<i>ib.</i>
38	Income and expenditure of municipalities	14
39	Works of public utility by private individuals... ..	<i>ib.</i>
SECTION X.		
40	Administration	16
41	Inspection work of Sanitary Commissioner	<i>ib.</i>
42	Inspection work of Deputy Sanitary Commissioner, Punjab	<i>ib.</i>

Para.	Subject.	Page.
43	Inspection work of the Additional Deputy Sanitary Commissioner, Punjab	16
44	Inspection work of Civil Surgeons and Assistant Surgeons ...	17
45	Free distribution of quinine	<i>ib.</i>
46	Filling up of depressions	18
47	Lectures on hygiene at Medical College, Lahore ...	<i>ib.</i>
48	Lectures on principles of elementary hygiene to vaccineinators ...	<i>ib.</i>
49	Formation of new towns in the vicinity of North-Western Railway during 1917	<i>ib.</i>
50	Health Officers and Sanitary Inspectors	<i>ib.</i>
51	The Society for Promoting Scientific Knowledge	<i>ib.</i>
52	Large fairs	19
53	Work of the Provincial Laboratory	<i>ib.</i>
APPENDIX A.		
	Proceedings of the Sanitary Board, Punjab	i
APPENDIX B.		
	Annual Report of the Sanitary Engineer to Government, Punjab, for the year 1917	iii
APPENDIX C.		
	Statement showing the death-rates from cholera, small-pox, fevers and dysentery and diarrhoea for the five years preceding and for the period since the introduction of drainage or water-supply or both in the undermentioned towns	viii
Nos.	ANNUAL FORMS.	
I	Statement showing the births registered in the districts of the Punjab during the year 1917	i
II	Statement of births and deaths registered in each district of the Punjab during the year 1917	ii
III	Deaths registered in the districts of the Punjab during each month of the year 1917	iv
IV	Deaths registered according to specified age periods from different diseases in the districts of the Punjab during the year 1917 ...	vi
V	Deaths registered according to classes in the districts of the Punjab during the year 1917	xvi
VI	Deaths registered from different causes in the districts (rural circles) of the Punjab during the year 1917	xviii
	Deaths registered from different causes in the towns of the Punjab during the year 1917	xx
VI B	Births and deaths registered in the cantonments of the Punjab during the year 1917	xxvi
VII	Deaths registered from cholera in the districts of the Punjab during each month of the year 1917	xxviii
VIII	Deaths registered from small-pox in the districts of the Punjab during each month of the year 1917	xxx
IX	Deaths registered from fevers in the districts of the Punjab during each month of the year 1917	xxxii
X	Deaths registered from dysentery and diarrhoea in the districts of the Punjab during each month of the year 1917	xxxiv
XI	Deaths registered from respiratory diseases in the districts of the Punjab during each month of the year 1917	xxxvi
XII	Deaths registered from plague in the districts of the Punjab during each month of the year 1917	xxxvii
STATEMENT.		
I	Monthly statement of plague occurrences in British districts and Native States in the Punjab during the year 1917	xl

Proceedings of His Honour the Lieutenant-Governor of the Punjab in the Home (Medical and Sanitary Department, No. 1632-S., dated Simla, the 24th June 1918.

READ—

The Report on the Sanitary Administration of the Punjab for the year 1917.

REMARKS. - The health of the year 1917 was influenced very adversely by the exceptional meteorological conditions. The weather of the first three months presented no abnormal features. April and May, however, were characterized by an unusually heavy rainfall, and an active and early monsoon set in at the beginning of June and continued with little remission until September and in part of the Province till late in October. As a result of this heavy precipitation a severe epidemic of malarial fever spread over the Province from September onwards and the number of deaths during the last four months of the year was considerably in excess of that of the first eight.

The prices of food grains though high have not varied to any substantial extent from those of the preceding year.

2. The year's birth-rate was 45·3 *per mille* which though slightly less than that of the preceding year, exceeded the average of the previous five years by ·1 *per mille*, and may therefore be regarded as satisfactory. The highest birth-rate was registered in the Rohtak District (55·4 *per mille*) while other districts in which the births exceeded 50 *per mille* were Gurgaon (54·5), Ludhiána (53), Karnál (52·2), Amritsar (52·1) and Ferozepore (51). On the other hand Simla, as usual, recorded the lowest rate (22·2), followed by Dera Gházi Khan (28·1), Muzaffargarh (33·6) and Jhelum (4·9). It is somewhat surprising to find that, judging by the figures for Rohtak, Gurgaon and Ludhiána, the absence of large numbers of recruits of military age has had no appreciable effect on the birth-rate.

A comparison of the quinquennial averages of each district with the birth-rates in 1917 shows that in 15 of the 28 districts the quinquennial average has been exceeded. Further analysis discloses the curious fact that the districts which return a decrease are with one exception, confined to the western half of the Punjab, while the improvement is similarly limited to the eastern half. The solitary exception is to be found in the isolated district of Kángra where, however, the falling off is insignificant. Ignoring the case of Kángra, a line drawn across the Punjab and following the eastern boundaries of the Siálkot, Gujránwála, Jhang and Multán Districts divides the Province into two parts corresponding exactly with the plus and minus birth-rate areas. There appears to be no obvious explanation of this peculiar feature and it would be interesting to know how far it is more than a mere coincidence. Those districts which show the largest improvement as compared with the quinquennial average are Ludhiána (9 *per mille*), Gurgaon (5·4) and Montgomery (5); while those in which the decrease has been most marked are the two Indus districts of Miánwáli (—5·4) and Muzaffargarh (—5·2). The figures, however, are somewhat deceptive in the case of such districts as Montgomery where owing to colonization the population must have increased considerably since the census of 1911.

There was an excess of births over deaths in all districts except Simla, Gujránwála, Shahpur, Miánwáli, Multán, Muzaffargarh and Dera Gházi Khan. The excess of births was greatest in Rohtak (24·2 *per mille*) and of deaths in Dera Gházi Khan (17·6 *per mille*).

3. The death-rate of the year was 37·9 *per mille*. This exceeds that of the preceding year by 7·2 and the average of the previous quinquennium by 6·7. As already stated the malarial epidemic of the last four months of the year contributed mainly to this unsatisfactory result, deaths from 'fevers' accounting for no less than 70 per cent. of the total. In 21 districts out of 28 the death-rate exceeded the quinquennial average, while in 25 it exceeded the

previous year's figures. Gurgaon was responsible for the highest rate—52 *per mille*—the lowest being recorded in Simla (26·3), Jullundur (28·7), and Hoshiárpur (28·9). Among large towns Amritsar returned the very high figure of 66·58, but both Multán and Lahore were considerably above their quinquennial averages. Among smaller towns the rate in Rájanpur was as high as 113·66, while of eight others in which the rate exceeded 70 *per mille* no less than six are situated in the south-west corner of the Punjab. These high death-rates were all the outcome of the abnormal rainfall and consequent severe epidemic of malaria. On the other hand certain towns have considerably improved upon their averages of the previous quinquennium. Khanna, for instance, shows a betterment of 26·33 *per mille*, while Murree (15·87) and Gohána (15·81) are well to the good. The death-rate in Murree (18·37) is in striking contrast to that of two years ago when it was as high as 64·63. Infant mortality exceeded that of the previous year by 23 per cent., an increase which agrees closely with the increase in the general death-rate.

4. Cholera accounted for 1,365 deaths against 1,651 in the previous year. The ratio of deaths *per mille* was less than a quarter of the average ratio for the previous five years. The disease exhibited its greatest activity from August to November, the highest mortality being that of September when 46 per cent. of the total deaths took place. Serious epidemics occurred in the Siáltkot, Ambála, Gurdáspur and Gujrát Districts, in the towns of Hoshiárpur, Multán and Amritsar and at Lahore Cantonment. The outbreak in the Gujrát District was traced to an imported case from Roorki while that in the Ambála District probably also had its origin outside the Province. The disadvantages arising from the absence of a piped water-supply are strikingly evidenced by the circumstances of the outbreaks at Multán and Jagádhri, and it is satisfactory to note that many towns are contemplating schemes to remedy this defect.

5. A gratifying feature of the report is the decrease in the loss of life from small-pox. The number of deaths from this disease was only 1,417, less than half the total of the previous year; and the ratio *per mille* (0·67) is the lowest on record. The disease reached its climax in the month of May when 201 deaths were registered. The district of Gurgaon was conspicuous for its comparatively high rate of 0·31 *per mille*. The greatest number of deaths in any one town, namely, 48, occurred in Rewári.

6. The mortality from plague though more than double that of the preceding year, deaths numbering 9,724 was again unusually low. The disease was most active in November and December. The areas chiefly affected were the Ráwalpindi and Jhelum Districts and the Central Punjab from Gujránwála to Ambála. The Western Punjab and the extreme south-east remained comparatively free up to the close of the year. In Ráwalpindi, which again proved an active centre for its dissemination, the disease was at its worst in October and November. The grain market appears to be the focus of the disease in this city and efforts are being made to destroy its power for evil. The outbreak in Ambála was most marked during April and May and in Jullundur, Ludhiána and Lahore in December.

7. Deaths from fever totalled 510,812, the largest number recorded since 1908, when 697,058 deaths occurred. The death-rate at 26·42 was nearly 10 *per mille* higher than the quinquennial average. The epidemic which began in September and reached its climax in November was the outcome of the excessive monsoon rainfall. Muzaffargarh with a death-rate of 43·48 *per mille* suffered in a higher degree than any other district, but in Gurgaon, Gujránwála, Shahpur, Montgomery, Jhang, Multán and Dera Gházi Khan the death-rate was double or more than double that of the preceding quinquennium. The Multán Division experienced an almost unprecedented rainfall during the year and all the districts of this Division exhibit a largely increased death-rate. In Gurgaon the severity of the epidemic was a consequence of the extensive floods.

8. The sum distributed by the Sanitary Board in aid of various sanitary works amounted to Rs. 1,70,274, but large grants were made after the close of

the calendar year and before the close of the financial year by which the distributions are governed. Administrative sanction was also accorded to many schemes and the Board has from time to time given much valuable advice to Government in cases referred to it for opinion besides taking the initiative in various matters connected with sanitary reform. The Sanitary Engineer and his staff were fully occupied during the year in advancing numerous drainage and other projects throughout the Province. The post of Sanitary Engineer was held by Mr. A. R. Astbury throughout the year and his report indicates that in spite of the difficulties in the way of obtaining the necessary plant from England the progress of drainage and water-supply schemes has on the whole been satisfactory. A welcome feature is the opinion of the Sanitary Board that the popularity of rural sanitation is at length showing signs of growth. Much credit is due to the local officers and those inhabitants of the Siálkot District who have taken a lead in this respect by putting forward schemes and by arranging for the partial provision of funds from local sources. The future of these improvement schemes in the Siálkot District will be watched with much interest.

9. His Honour is indebted to Coloney Hendley for the energy which he has devoted to the discharge of his duties as Sanitary Commissioner, which office he held throughout the year in Addition to that of Inspector-General of Civil Hospitals. He also desires to thank him for an interesting report. The posts of Deputy Sanitary Commissioner and Additional Deputy Sanitary Commissioner were held throughout the year by Major W. H. C. Forster, I.M.S., and Dr. Khwajah Abdurrahman, respectively, and His Honour's acknowledgments are due to them for their valuable works.

ORDER.— Ordered that a copy of the foregoing remarks be circulated with the report and be furnished, with the usual number of copies of the report, to the Government of India; also that the review be published in the *Punjab Government Gazette*.

Ordered, also, that a copy be furnished to the Sanitary Commissioner, Punjab, for information.

By order of His Honour the Lieutenant-Governor of the Punjab,

O. F. LUMSDEN,

Financial Secretary to Government, Punjab.

SANITARY DEPARTMENT.

Memo. of Errata.

In the Annual Sanitary Report of the Punjab for 1917—

1. On page 1, paragraph 1, line 6, *for* “higher” *read* “lighter.”
2. On page 1, paragraph 2, *substitute* the following for the first 3 sentences “Khan Bahadur Sheikh Rahim Bakhsh, M.A., Director of Land Records, Punjab, has furnished me with the usual return which shows that the average retail price of wheat was $9\frac{5}{16}$ seers per rupee at Ambala, $9\frac{1}{16}$ at Lahore, $8\frac{1}{16}$ at Rawalpindi and $9\frac{2}{16}$ at Multan during the year 1917. The average rates of barley were $13\frac{3}{16}$ at Ambala, $13\frac{3}{8}$ at Lahore, $13\frac{1}{16}$ at Rawalpindi and $12\frac{5}{8}$ at Multan, and that of jowar $15\frac{1}{4}$, $12\frac{1}{2}$, $13\frac{1}{8}$ and $12\frac{1}{16}$, respectively. As regards bajra the average rates varied from $12\frac{5}{8}$ to $13\frac{1}{4}$ seers at the principal markets of Ambala, Lahore, Rawalpindi and Multan, that of maize from $12\frac{1}{16}$ to $14\frac{7}{8}$ and that of gram from 11 to $12\frac{1}{2}$ seers per rupee.”
3. On page 2, paragraph 6, lines 14-16, *for* “Amritsar and Gurdaspur Multan Division,” *substitute* the words “Lahore, Sialkot and Gujranwala,” and for the remainder of the sentence *substitute* the following “In the remaining 2 divisions the rate in 1917 was less except in Gujrat District.”
4. On page 3, paragraph 10, line 1, *substitute* the words “In the districts of” *for* “with the exception of 7 districts, namely.”
5. On page 6, paragraph 22, line 41, *delete* the word “cases” *after* “22.”
6. On page 12, paragraph 23, line 5, *for* “18” *read* “118.”
7. On page 15, line 7, *for* “Nurpur” *read* “Nanpur.”
8. In Appendix A (Proceedings of the Sanitary Board, Punjab), page 2, against Kalka Drainage Scheme, *for* “Rs. 35,531” *read* “Rs. 36,531.”
9. Annual Form No. II against total, sub-column 10, *for* “878,785” *read* “378,785.”
10. Annual Form No. IV, Kangra, against small-pox in sub-column 26, *insert* “1.”
11. Annual Form No. IV, Amritsar, against dysentery and diarrhoea, sub-column, 10 *for* “4” *read* “49.”
12. Annual Form No. IV, Shahpur, against all other causes, sub-column 6, *for* “213” *read* “2,113.”
13. Annual Form No. IV, Muzaffargarh, against total, sub-column 16 *for* “98” *read* “968.”
14. Annual Form No. IV, Total for the Province, against dysentery and diarrhoea, sub-column 14, *for* “32” *read* “312.”
15. Annual Form No. IV, Total for the Province, against total, sub-column 5, *for* “1,1363” *read* “113,603.”
16. Annual Form No. VI-B, Rohtak District, against Jhajjar town, sub-column 27, *for* “34.35” *read* “34.55.”
17. Annual Form No. VI-B, Gurgaon District, against Rewari town, sub-column 17, *for* “89” *read* “869.”
18. Annual Form No. VI-B, Gurgaon District, against Rewari town, sub-column 21, *for* “1.9” *read* “1.69.”
19. Annual Form No. VI-B, Karnal District, against Karnal town, sub-column 21, *for* “17.6” *read* “17.56.”
20. Annual Form No. VI-B, Hoshiarpur District, against Khanpur town, sub-column 26, *for* “3.31” *read* “31.31.”
21. Annual Form No. VI-B, Gujranwala District, against Sharakpur town, sub-column 3, *for* “2,482” *read* “4,482.”
22. Annual Form No. VI-B, Shahpur District, against Sahiwal town, sub-column 7, *for* “33” *read* “330.”
23. Annual Form No. VI-B, Lyallpur District, against Gojra town, sub-column 3, *for* “541” *read* “5,417.”
24. Annual Form No. VIII, against Amritsar, sub-column 4, *for* “19” *read* “13.”

Section I.

MR. GILBERT T. WALKER, C.S.I., M.A., Sc. D., F.R.S., Director-General of Observatories, has kindly furnished the following brief summary of the chief meteorological features of the Punjab during the year 1917 :—

Chief meteorological features.

During January and February weather over the Punjab was remarkably settled, and rainfall was either altogether wanting or much higher than usual. March was also drier than usual, though not to the same extent as the two preceding months. April, on the other hand, was abnormally wet and unusually late snowfall occurred in Simla on the 11th and 22nd. In May there were numerous thunderstorms and duststorms, and the rainfall for the month was largely above normal. The monsoon appeared over the Province on June 2nd, about three weeks ahead of the average date, and gave widespread rain on the 2nd, 3rd, 7th, 17th to 20th and 29th, with the result that the total fall for the month exceeded the normal by upwards of an inch or 65 per cent. The July rainfall was nearly normal in the south-west of the Province and in excess by 13 per cent. in the east and north. A very vigorous monsoon prevailed in August and September, and rain fell almost continuously; the total over the Province exceeded the normal by upwards of 4" or 75 per cent. in the former month and $8\frac{1}{4}$ " or 306 per cent. in the latter. In October numerous showers occurred in the north and east towards the end of the first week, and there was a burst of exceptionally heavy rain over the eastern half of the Province from the 24th to the 26th. Weather was unusually settled in November. In December winter depressions were of frequent occurrence and precipitation was heavier than usual in the north and east Punjab.

Humidity was distinctly low in February and March, about the average in January and July and decidedly high in all other months. Skies were unusually cloudy during nearly the whole period from April to October and much clearer than usual in February and November. Maximum temperature exceeded the normal by $5\frac{1}{2}^{\circ}$ in February and was lower than usual by 3° or more from April to June and again from August to November; minimum temperature was sensibly normal except in April, May and November, when it was about 4° below it.

2. Khan Bahadur Shaikh Rahim Bakhsh, M.A., Director of Land Records, Punjab, has furnished me with the usual return which shows that the average retail price of wheat was 10 seers per rupee at Ambala, $10\frac{3}{16}$ at Lahore, $9\frac{7}{8}$ at Rawalpindi and $10\frac{11}{16}$ at Multan during the year 1917. The average rates of barley were $12\frac{3}{4}$ at Ambala, $13\frac{9}{16}$ at Lahore, $13\frac{7}{16}$ at Rawalpindi and $12\frac{7}{16}$ at Multan, and that of jowar $13\frac{1}{2}$, $12\frac{7}{16}$, $12\frac{15}{16}$ and $12\frac{13}{16}$, respectively. As regards bajra, the average rates varied from $10\frac{1}{8}$ to $12\frac{1}{8}$ seers at the principal markets of Ambala, Lahore, Rawalpindi and Multan, that of maize from $13\frac{5}{16}$ to $15\frac{7}{16}$ and that of gram from $11\frac{5}{8}$ to $12\frac{5}{4}$ seers per rupee. It will be observed that in the case of wheat, maize and gram, the average prices were higher, while for the others it was lower than in the preceding year. This rise was due to heavy exports to meet increased military requirements while the fall was due to the harvests in 1916-17 having been much better than in the previous year.

Prices of food-grains.

3. An enquiry into the rates of wages was held in all the districts of the Punjab in December last, but the report has not been published as yet. It is believed that wages have generally risen owing to the increased requirements for the army due to the war.

Wages of labour.

Section V.—Vital Statistics.

4. The rough estimated population prepared by adding births and subtracting deaths since the last census report works out in 1917 to 21,005,233, (11,506,888 males and 9,498,345 females) as against the census population of 19,337,146 (10,608,101 and 8,729,045). Calculated on this estimated population the birth-rate is 41·7, *i.e.*, 3·6 less than the rate calculated on the census population and similarly the death-rate 34·9 is less by 3·0. The estimated population is in excess in all the districts of the Province except Simla.

5. Previous to the three last months of the year when malaria caused a high death-rate, the year 1917 was a healthy one, the birth-rate was an average one and the death-rate low. Cholera prevailed only to a slight extent, small-pox gave the lowest rate in recent years, plague, though worse than in 1916, showed a less rate than that recorded for some years, while the rates under other heads of mortality were about the average.

6. **Births.**—The birth-rate amounted to 45·3 *per mille*, *i.e.*, ·3 less than it was last year and ·1 in excess of the quinquennial average. The actual number of births was 876,733, of which 459,273 were males and 417,460 females. Though less than last year the birth-rate is quite satisfactory. A comparison by districts with the quinquennial average discloses the fact that in the Ambala Division, the Jullundur Division, with the exception of Kangra, and the Lahore Division with the exceptions of Sialkot and Gujranwala, the rate in 1917 was in excess. In the remaining two Divisions of the province the rate in 1917 was less than the average for the previous 5 years except in the districts of Montgomery and Lyallpur.

Compared with the previous year the rate was greater in the whole of the Ambala Division, except in Karnal where the rate was the same; the Jullundur Division, except Ferozepore, the Lahore Division, except Amritsar and Gurdaspur, the Rawalpindi Division except Gujrat and in the whole of the Multan Division. Compared with the average for the previous 5 years, 15 districts out of 28 show an increase which in one of them, Ludhiana, amounts to 9·0 *per mille*, in Gurgaon 5·4 and Montgomery 5·0, in all the others it ranges between 3·8 in Rohtak and 0·1 in Ambala. Among those which have a lower rate, Mianwali shows the greatest decrease 5·4, Muzaffargarh 5·2, and Gujranwala 4·1.

In comparing the total number of births by months with the previous year it is to be observed that in the first 5 months and in October the births were in excess, from June to September they were considerably less, slightly less in November and a good deal less in December. The decrease from June to September was probably due to the prevalence of malaria in the autumn of the previous year, but also no doubt to the high death-rate due to malaria during the three last months of the year under review.

7. The highest birth-rate, namely, 48·13, was registered in the Central Provinces, the United Provinces coming next with 46·08. The provinces with a rate lower than that of the Punjab were as follows:—Bihar and Orissa 40·4, Burma 36·25, Bengal 35·91, Bombay 35·72, Madras 32·37, North-West Frontier Province 32·11 and Assam 31·35.

8. The birth-rate in the 38 principal towns of the Province, those with a population of 10,000 or upwards, amounted to 46·2 *per mille*: this rate is 0·8 less than it was in 1916 and 1·1 more than the average for the previous 5 years. Of the three largest of these towns, Multan recorded the highest 49, Amritsar 47 and Lahore 37, the corresponding figures for last year were 48, 49 and 40, while the quinquennial average was 45, 47 and 38, respectively. It will thus

be seen that Multan shows an improvement on the last year and the quinquennial average, Amritsar only on the latter, while Lahore shows a lower rate on that of both.

9. Rohtak this year recorded the highest birth-rate 55·4. It was closely followed by Gurgaon 54·5 and Ludhiana 53·0, all being in excess of the highest rate recorded last year in the Ferozepore District where it was 52·7. The lowest rate as usual was recorded in Simla 22·2, while next in order came Dera Ghazi Khan with 28·1. In the others it varied between 33·6 in Muzaffargarh and 52·2 in Karnal.

10. With the exception of 7 districts, namely, Dera Ghazi Khan, Muzaffargarh, Multan, Mianwali, Shahpur, Gujranwala and Simla, the death-rate was in excess of the birth-rate. The excess was as high as 17·6 in Dera Ghazi Khan, 13·7 in Muzaffargarh and varied between 3·3 in Shahpur and 7·9 in Gujranwala, in the others. In all these districts it should be remarked that owing to fevers the total death-rate was exceptionally high, thus accounting for an excess in deaths over births. On the other hand the total excess of births over deaths amounted to 7·4, but in individual districts was as high as 24·2 in Rohtak, 21·8 in Ludhiana, 20·1 in Karnal, 19·3 in Ferozepore, 18·4 in Jullundur and 17·3 in Lyallpur; in the others it ranged between 1·6 in Montgomery and 14·9 in Hoshiarpur.

11. **Deaths.**—The death-rate during the year under report amounted to 37·9 which is 7·2 *per mille* in excess of the rate recorded in the year preceding and 6·7 compared with the average for the previous 5 years. The actual numbers were 733,109 deaths (378,785 males and 354,324 females). This high death-rate is due entirely to fevers which accounted for no less than about 70 per cent. of the total deaths registered. The rates for dysentery and diarrhoea remained the same as in the previous year, while under cholera, small-pox and all other causes there was a slight decrease; under the other heads of mortality, fevers being omitted, there was a slight increase.

12. The Bombay Presidency shewed the highest death-rate 40·76, the Punjab and the United Provinces coming next with 37·91 *per mille* each. The Central Provinces had a rate of 36·06, Bihar and Orissa of 35·2, the North-West Frontier Province of 29·95, Assam of 27·09, Madras of 26·23, Bengal of 26·19 and Burma of 25·30.

13. With seven exceptions, Karnal, Hoshiarpur, Jullundur, Ludhiana, Gujrat, Jhelum and Rawalpindi, the death-rate by districts was in excess of the average for the previous 5 years, while compared with the previous year, the only exceptions were Kangra, Ferozepore and Rawalpindi. The highest death-rate 52·0 was recorded in Gurgaon, whilst in Multan, Gujranwala, Montgomery, Muzaffargarh and Dera Ghazi Khan the rates were 49·6 and 49·1, 47·9, 47·3 and 45·7 respectively. The lowest rate was recorded as is usual in Simla, 26·3, but this was followed closely by 28·7 in Jullundur and 28·9 in Hoshiarpur, in the others it varied between 30·8 in Kangra and 43·6 in the Amritsar District.

14. The healthiest month of the year was February, when the rate recorded was 1·91, this was closely followed by 2·04 in August, 2·06 in July, 2·20 in June, 2·21 in March and April, 2·35 in May, 2·45 in January and 2·94 in September. The first indication that malaria was likely to be widespread and likely to assume an epidemic form was the increased death-rate in September, followed by a higher one in October 5·86. The highest rate recorded was in November 6·75, but the rate again fell to 4·92 in December. It will be seen that the rate in the last quarter equalled the rate recorded in the first 8 months of the year.

15. As usual the highest rates were recorded among infants, 267·52 for males and 256·61 for females, as against 219·32 and 206·12 last year. Calculated on the number of births during the year the rates were 247·35 and 248·60, as against 201·79 and 198·47 in the year preceding. Next in order were children between 1 and 5 and old people above 60, the rates being 85·48 and 92·68 for the former and 84·73 and 87·77 for the latter. The only other age group which had a high rate was that between 50 and 60, the rates being 31·64 and 31·60, in all the others it did not exceed 19·90 the female rate for 40 and under 50 and it was as low as 9·43 the male rate for 20 and under 30. The female rate exceeded the male rate under every age group except between 50 and 60 and under one year of age. The high rate among infants was due chiefly to fevers and all other causes and partly to respiratory diseases, among the other age groups fevers were mainly responsible for the high rate.

16. The Gujranwala and Attock Districts again recorded more deaths under "other classes" than the actual numerical population of those classes, while the following districts recorded very high rates :—Dera Ghazi Khan 431·37, Sialkot 318·52, Jhang 166·67, Montgomery 157·89, and Amritsar 91·69. The total rate for the whole province for this class was 39·34 as against 28·39 last year. The rates for the other classes were Muhammadans 41·20, Hindus 33·65, Indian Christians 42·17 as against 31·52, 29·62 and 33·02 in the year preceding. It will thus be seen that while the increase among Hindus was only 4·03, that for Muhammadans and Indian Christians amounted to 9·68 and 9·15, respectively.

17. The rural and urban death-rates were 37·43 and 42·77 respectively as compared with 30·28 and 34·98 last year. The urban rate exceeded the rural rate under all the heads of mortality except fevers. Amritsar recorded the highest death-rate among the three largest towns of the Province, 66·58 as against 39·94 in the previous year and 41·63 the quinquennial average. Multan came next with 52·67 against rates of 35·21 and 32·22 for last year and the quinquennial average, while at Lahore the corresponding rates were 44·40, 36·47 and 33·98. These high rates were due to excessive fever mortality in Lahore and Multan and fever and respiratory diseases in Amritsar. Among the smaller towns the highest rate was recorded in Rajanpur, 113·66; the rates in the others were Mithankot 98·88, Firozpur-Jhirka 93·37, Khangarh 84·20, Dajal 81·24, Karor 76·22, Shujabad 72·47, Alipur 71·86, Bhagbanpura Bogiwal 71·79; in all these fevers were shown as mainly responsible for the high rate. The lowest rates were recorded in Nankana Sahib 8·16, Sargodha 10·40, Gojra 10·89, Garhdiwala 15·52, Fattehabad 16·21 and Akalgarh 16·99, these low rates are due to the absence of malaria in an epidemic form. In the remaining towns the rates varied between 18·37 in Murree and 65·36 in Pathankot.

18. Compared with last year there has been an increase of 37,767 in the total number of entries checked; the actual numbers checked were 752,491 in the birth and 514,564 in the death registers.

The percentages of omissions detected to total number of entries checked by Divisional Inspectors worked out at 1·46 and 1·52 for male and female births and 0·81 and 0·90 for male and female deaths, those checked by Superintendents of Vaccination and Vaccinators at 1·02 and 1·11 for births and 0·59 and 0·65 for deaths, those by the revenue staff at 1·11 and 0·87 for male and female births and 1·19 and 0·95 for deaths.

The number of chaukidars punished for neglecting to report cases of domestic occurrence was 72, the total fines amounting to Rs. 49, while in municipal towns 186 persons were punished for neglecting to register births and 98 to register deaths, the total fines coming to Rs. 253.

19. There were 133 births recorded at railway stations outside municipal limits and 134 deaths compared with 93 and 96, respectively, the year previously. Of the deaths 3 were due to injuries, 4 to cholera, 6 to diseases.

Death rates according to different diseases under specified age periods. Annual Form No. IV.

Deaths by classes. Annual Form No. V.

Deaths in towns and rural circles. Annual Form No. VI A and B.

Inspection of birth and death registers.

Births and deaths among employés at railway stations.

of the respiratory organs, 9 to dysentery and diarrhoea, 28 to all other causes and 84 to fevers; there were no deaths from small-pox or plague.

20. There were 229 births and 149 deaths amongst Europeans and Anglo-Indians as against 193 and 102 respectively last year. The deaths were distributed as follows:—All other causes 98, fevers 22, diseases of the respiratory organs 13, cholera and dysentery and diarrhoea 7 each, and injuries 2.

Births and deaths among the non military population of cantonments. Appendix to Annual Form No. VI-B.

21. There were 3,953 births recorded among the non-military population of cantonments as against 4,078 in the preceding year and 4,675 deaths as against 3,796. The deaths were classified as follows:—Cholera 15, injuries 55, dysentery and diarrhoea 179, plague 256, respiratory diseases 572, all other causes 1,338 and fevers 2,260; there was no death from small-pox.

Section VI.—Chief Diseases.

22. **Cholera.**—Cholera showed no marked prevalence. Altogether there were 1,365 deaths, *i.e.*, 286 less than in the previous year, the mortality rate being 0·07 *per mille* as compared with 0·09 in 1916 and 0·30 the average for the previous five years. This good result is doubtless very greatly due to the early preventive measures taken and to better knowledge of the manner in which the disease is spread.

The mortality was highest in the Sialkot District where 282 deaths occurred, Multan coming next with 183, Ambala 174, Gurdaspur 163, Lahore 141, Amritsar 121, while in the districts of Hoshiarpur, Gujrat, Lyallpur, Hissar, Gujranwala, Karnal, Shahpur, Kangra, Jullundur, Jhang, Muzaffargarh, Jhelum, Ludhiana, Rawalpindi and Ferozepore, the number of deaths varied between 74 and 2, other districts remaining free.

With the exception of 3 deaths, the province was free from cholera in the first half of the year. The first victim was a Christian child of 3 years of age whose father is an itinerating preacher in the villages in the Fazilka tahsil. Beyond the fact that the father attended the Muktsar fair on the 12th of January and the child contracted the disease on the 17th and died a couple of days later at Fazilka, nothing is known. The second case occurred in a sepoy of a Gorkha regiment which was on its way from Burma to Jhelum. He fell ill at about 2 A.M. on the 7th May in the train near the Roorki Railway Station and was removed from it at Ludhiana, where he died in the Civil Hospital the same afternoon. The 3rd case was a Hindu Jat who had not been away from his native place, Abohar, in the Ferozepore District; he got bad on the 31st May and died on the 9th June. There is a big grain mandi at Abohar to which it is stated a great number of people come from the Bikaner State, only 10 miles off, where it is believed cholera was prevalent at the time.

During the month of July 20 deaths were recorded in the Gujrat District, 10 in Gurdaspur, 3 in Jhang, 2 in Amritsar and 1 each in Jullundur, Ludhiana and Sialkot. In the month of August when the number of deaths rose to 147, the largest number of deaths 76 was recorded in the Ambala District while Lahore came next with 25.

The epidemic assumed serious proportions in the months of September and October when 628 and 463 deaths, respectively, were recorded. In November there were 86 deaths and in December the province became free. In individual districts the highest number of deaths returned in September was 171 in Sialkot, and 115 in Multan and in October 101 in Sialkot and 86 in Gurdaspur. Compared with 1916 the mortality was lower in every month except January, September, October and November.

Out of the 142 towns in the province only 31 recorded deaths from cholera, the number being 791. The disease was mainly prevalent in Multan (118), Sialkot (117), Amritsar (108), Jagadhri (103), Lahore (87), Ambala (54), Hoshiarpur (27) and Hissar and Pathankot 22 cases each. In Dharmasala, Fazilka, Batala, Sahowala and Eminabad one death each, Jamke, Jhelum and Muzaffargarh 2 deaths each, in Buria, Hariana, Ludhiana, Jhang-Maghiana and Leiah 3 each, while in Panipat, Jullundur, Baghbanpura Bhogiwal, Dinanagar, Pasrur, Gujranwala, Khushab, Pind Dadan Khan and Shujabad there were from 4 to 17. Serious rural epidemics occurred in villages Chak Ram Das in the Sialkot District, Manwal and Gharota villages in the Gurdaspur District, resulting in 39, 29 and 25 deaths, respectively. The origins of the disease were not ascertained. The population of the Malka village in the Gujrat District, where 56 cases and 19 deaths occurred between the 10th and the 23rd July, numbering 1,073, consists almost entirely of Muhammadans, amongst whom all the cases occurred, presumably, while fasting on account of the Ramzan. The first victim was a lad who had gone to Roorki in the United Provinces to enlist in the army, but who was rejected on account

of his age and returned home on the 9th July. He missed the train at the Ambala Cantonment, where after a drink of water he vomited and purged once. He caught the train on the 9th and reached his home in the village of Malka the following evening when he had violent and frequent vomiting and purging. He remained sick for three days and then began to recover. In the meantime he was attended by a barber who fell ill on the 15th with all the symptoms of cholera and died the next day, the same day the barber's sister-in-law got ill and died. Subsequently two more cases occurred among the people using the water of the well nearest the house of these first cases, but two Hindu families living amongst these people escaped as they drank from a separate well of their own inside the compound of their houses.

The epidemic in Hoshiarpur town commenced on the 9th November and resulted in 23 deaths in the course of a week. As the period of the outbreak corresponds with the Naurata fair, when the Kangra valley is visited by pilgrims from all parts of the province, many of whom pass through Hoshiarpur, it was presumed at the time that the disease was imported from one of the then infected towns of Amritsar, Lahore or Multan. A final outbreak seemed to be due to the contamination of sugarcane juice from one definite source, the man who sold it and others who partook of it suffered from the disease and after its sale was stopped cases ceased to occur.

The epidemic at Jagadhri caused 179 cases and 103 deaths. It was believed that the disease was imported from Hardwar, or at all events from the neighbouring district of Saharanpur in the United Provinces where cholera existed in an epidemic form. Speaking generally it may be said that the disease was limited to the outskirts of the town, lowlying localities inhabited by low-caste people, kamins, etc., where also the subsoil level of water is very near the surface. The central part of the town occupied mainly by the better classes remained practically free. After the epidemic died out in Jagadhri the disease appeared in the Ambala City and 64 cases and 54 deaths occurred. It was probably introduced from Jagadhri though the fact that it was so could not be determined. At Multan the first case occurred on the 13th August in the centre of the town, the second was in a Hindu who had come from the village of Kasba, at a distance of 16 miles from Multan, on the 19th August to attend the court, and he developed symptoms of cholera on the 22nd. This case had apparently no connection with the first case. The disease began to spread and the heavy and incessant rains seem to increase this tendency and it was not till the 7th November that the epidemic was stayed.

It will be seen that only in one instance was an outbreak traced directly to the Hardwar pilgrim route, the one that occurred at Malka, but I think we might certainly presume, from the position of Jagadhri, that the epidemic there originated in its vicinity. When it was known in August that cholera was prevalent at Hardwar, all Deputy Commissioners were asked to take such steps as might seem advisable to them to let people know of the fact with a view to their postponing intending visits to this place of pilgrimage or its vicinity.

Owing to the greatly increased cost and difficulty with which potassium permanganate is obtained at present, I proposed keeping a supply of chlorinated lime (bleaching powder) for the disinfection of wells, but I found by experience that it was impossible to obtain it in good condition on account of the time it takes goods to arrive up-country. Most of the powder on arrival in the Punjab had lost a considerable portion of its available chlorine, and some was found to be practically inert. Local bodies were consequently asked to make their own arrangements for further supplies of permanganate of potash when their stock required replenishing.

Owing to the outbreak of cholera in Multan the Military Department becoming anxious about the Army Clothing Factory there, as, some of its employees having been reported to have contracted the disease, it was thought that the clothing might become contaminated, I sent the Additional Deputy Sanitary Commissioner to Multan to co-operate with the Civil Surgeon in

organising preventive measures. Under their personal direction and with the zealous assistance of the Health Officer the infected houses, the drains, the clothing of patients and the wells were thoroughly cleansed and disinfected.

At Jagadhri Assistant Surgeon Diwan Chand and Dr. Sadiq did excellent work both in carrying out preventive measures and in treating the sick. The Additional Deputy Sanitary Commissioner Dr. Khwaja Abdul Rahman remained at Jagadhri at the commencement of the outbreak for 10 days and later on for about a week personally supervising the very heavy work of disinfecting the wells, the drains and the houses in which cases occurred.

There was a somewhat prolonged outbreak of cholera amongst the troops and in the bazars of the Lahore Cantonment with regard to which the Civil Surgeon and the Health Officer, Lahore, were asked to render all possible assistance.

The conditions prevailing at Multan are very unsatisfactory, the drainage and water-supply are bad and nothing but the introduction of a proper drainage system and a piped water supply, for which arrangements are being made, can protect the town from recurrences of outbreaks of this and other diseases.

At Jagadhri great difficulty was found, as at Panipat last year, in discovering and disinfecting the numerous wells, public and private. The sub-soil water at Jagadhri is so near the surface that it costs little to sink a well and almost every man can afford the luxury of having his own water supply, and incidentally one that can easily be fouled, in his own compound. The heavy rains this year raised the subsoil level so high and caused such a large amount of surface flow into the badly constructed and protected wells as to make it extremely difficult to keep them free from contamination and rendered it necessary to disinfect them repeatedly before the desired effect was obtained. If a piped water supply is not introduced into a town, where such conditions prevail, the next best thing is to encourage the use of tube wells; in some places as in Hoshiarpur and Ferozepore, many of the people are well aware of the protection so afforded against water-borne diseases, but owing to the war the increased cost of these wells has made their extended use almost prohibitive.

23. Small-pox.—The total deaths from small-pox amounted to 1,417 as compared with 2,886 during the previous year. The death-rate amounted to 0·07 per 1,000 of population as against 0·15 in 1916 and 0·79 for the previous five years. This year's rate is the lowest on record since the introduction of the system of registration of births and deaths in this province. From January in which month 46 deaths were registered, the disease began to increase and the number of deaths rose to 68 in February, 108 in March, 142 in April and 201 in May. From that month onwards the number of deaths decreased and in June, July and August the number recorded was 186, 182, and 105, respectively, while in September, October, November and December there was a further reduction to 95, 99, 94 and 91 respectively.

The mortality rate from small-pox was as high as 0·31 *per mile* in the district of Gurgaon, 0·20 in Lahore, 0·19 in Lyallpur, 0·18 in Karnal, 0·15 in Montgomery, 0·14 in Ferozepore, 0·13 in Amritsar and 0·12 in Ludhiana; the rate in all the others was below that of the provincial except in Ambala where it was exactly equal with it. The lowest rate reported was in the Hissar, Kangra and Jhang Districts where it was 0·001 while in Sialkot, Gujranwala, Gujrat and Rawalpindi it was 0·01.

The proportion of male to female deaths was nearly equal as has been the case in previous years, the rates in 1917 being 0·07 in the case of males and 0·08 in that of females as against 0·14 and 0·16 in the year preceding.

The death-rate from small-pox in urban areas was 0·11 as compared with 0·07 in rural circles and the average rate for towns in which the compulsory Vaccination Act is in force was 0·11 as against 0·14 in the previous year.

One hundred and nine municipal towns escaped the disease and in the remaining 33 towns a total of 185 deaths was registered as against 265 in the previous year. In twenty-four towns the number of deaths reported was five or less while in 6 it varied between 9 and 6. The highest number of deaths was recorded in Rewari 48, Panipat and Amritsar coming next with 37 and 16 respectively.

Among those towns in which the Vaccination Act is not compulsory, the highest number of deaths was recorded in Firozpur-Jhirka 9, Batala 5, Nakodar and Pindi Bhatian 4 each and Faridabad 2.

The mortality was greatest among infants under one year of age, the male death rate being 0·36 and the female 0·37; among children from one to five years of age the rates were 0·32 and 0·34 while in the next five years period 5—10 it was 0·09 and 0·11; over 10 years of age the death-rate gradually fell with increasing age.

In Simla altogether 8 cases occurred during the year—one in May, one in June and one in July while the remaining five occurred in August in the Railway Quarters of the Kalka-Simla Railway; these were discovered owing to the receipt of an anonymous post card sent to the Health Officer, Simla. The enquiry showed that the first victim was a girl aged 10 years who had arrived from Agra 2 weeks before and had apparently contracted the disease there or *en route*. She stayed with relations who concealed the disease and treated her for it themselves for over a month. Departmental disciplinary action was taken in the case by the Railway authorities. In the 4 other cases infection was directly attributed to this case, 3 in children and 1 in an adult who attended on one of the infected cases. Only one of the 5 cases had been vaccinated. Vigorous precautionary steps,—vaccination and segregation—were taken on the discovery of the outbreak and the spread of the disease ceased.

24. Plague.—The Inspector-General of Civil Hospitals, Punjab, has furnished the following plague report:—

Mortality.—There were 9,724 deaths in the Province compared with 4,151 in the preceding year. It was not a bad year on the whole but there were as many as 4,084 deaths in the last two months, *i.e.*, nearly half the total, indicating from experience a bad epidemic in 1918.

Area of distribution.—Rawalpindi and Jhelum in the north-west, Ambala in the east, and the districts of Lahore, Jullundur, Gurdaspur, Ludhiana and Gujranwala in the centre were worst infected, accounting for more than 76 per cent. of the total mortality. The districts of Simla, Mianwali, Muzaffargarh, Dera Ghazi Khan and Jhang were free. Ferozepore also may be said to have escaped as there was only one death there in April; while in the districts of Sialkot, Gujrat, Multan and Shahpur out of the 106 deaths that occurred, all except 5 in Shahpur were imported from either Rawalpindi or Jhelum.

The disease was known to have been imported in 4 instances from Rawalpindi and Jhelum and in 4 from outside the province. From the way deaths occurred throughout the year in the Nurpur Tahsil of the Kangra District it is doubtful if this hill area was at any time free from the disease. The Patiala State was infected for 9 months of the year.

The case mortality was 69 per cent as compared with 79 per cent. last year. The disease was chiefly bubonic in type.

Seasonal distribution.—There was a marked change in the Seasonal Curve. Usually we get a gradual rise continuing from January to April and then an abrupt fall. This year the rise extended over May and though it dropped in June it was not till July that there was a very definite fall. This was associated with the unusual rainfall in the late spring. The fall in the Seasonal Curve reached its lowest in August when there were only 87 deaths; but from thence onwards the rise was much steeper than would generally be expected. The fact that infection was widely distributed probably accounted for this result, since six districts, *viz.*, Jullundur, Ludhiana, Lahore, Gurdaspur, Gujranwala and Rawalpindi, were rather badly affected.

Measures.—As Sanitary Inspectors had to be employed, instead of medical assistants, for preventive purposes, instructions were issued to all Civil Surgeons to train them thoroughly in anti-plague measures and to satisfy themselves that they were efficient in the carrying out of their duties. As usual the measures depended upon were—

- (a) ratting by means of traps, poison and smoke apparatus—concentrated round infected areas and in infected places during epidemics and in selected late infected villages during the off season,

- (b) cresol fumigation and inoculation, where possible, during infection, and
- (c) in some districts evacuation.

The city of Rawalpindi was, as has already been indicated, an important centre for the distribution of the disease. The tahsil in which it stands was never free, the city was reported to be so early in the year but it became markedly infected in August and this continued increasingly till October when it began to show a decrease while in the district there was a considerable increase.

I visited Rawalpindi with Major Norman White, I.M.S., C.I.E., Officiating Sanitary Commissioner with the Government of India, and later forwarded his report with my own on to Government on what appeared to be the special conditions obtaining in this city, and made certain recommendations. The committee has succeeded in obtaining the services of a fully qualified Health Officer and it should now have no difficulty in putting the city for which it is responsible into a relatively sanitary condition.

Lahore city had a rather bad outbreak at the end of the year which continued on to 1918.

Barium Carbonate was used throughout the year as a rat poison with satisfactory results. One lot was impure, containing as shown after analysis by the Chemical Examiner, nearly 10 per cent. of earthly impurities.

Reporting—There is a continued improvement in the reporting of first infections in most districts. There is, however, great room for improvement in reporting in cities; there is no doubt but that in the large centres of Lahore and Amritsar a greater mortality has occurred from this disease than is shown in the death returns.

Attitude of people.—The attitude of the people towards anti-plague measures is said to have improved. It, however, varies in different districts to different measures, some preferring one particularly and some another. Inoculation in particular has become distinctly more acceptable to the people and it is a matter to be regretted that the amount of vaccine available has been limited owing to the difficulty experienced at Bombay in obtaining glass receptacles. In all 19,400 inoculations were performed, mostly in the districts of Jullundur, Lahore and Ludhiana.

Special Plague Staff.—Qualified Sanitary Inspectors were engaged in all the districts as Plague Supervisors throughout the year and in the summer they were assisted in some districts by the members of the Vaccination Staff.

Dr. Sinha has worked as my assistant in this department throughout the year. He toured in ten districts during the hot weather to inspect preventive work. He was deputed specially to give the Military authorities assistance in checking outbreaks of the disease in Ambala and Lahore Cantonments. The Military authorities expressed themselves as being very grateful for the help given them and I have pleasure in commending Dr. Sinha not only for the assistance he has rendered in this connection but also in the epidemic of malaria in Amritsar in the autumn.

25. Fevers.—The heading "Fever" includes deaths from all kinds of diseases in which fever is a predominating symptom and particularly is this the case with plague which the people will persistently continue to conceal. It is, however, a fairly true index to the prevalence of malaria in the malarial season when again no doubt a good many deaths that should be included in it are returned under the head of "respiratory diseases."

Under "fevers" a total of 510,812 deaths was registered against 376,003 in 1916, showing an increase of 134,809 deaths. The death-rate was 26.42 against 19.44 in 1916 and a quinquennial mean of 16.68. The mortality from fevers was the highest on record since 1908, in which year it amounted to 697,058. The largest number of deaths was recorded in the last quarter of the year in the following order:—November 104,555, October 85,680 and December 73,098 as against 138,161 in November, 169,155 October and 83,364 December 1908. The fever death-rate in all the districts in the province except Kangra and Rawalpindi was higher than that recorded in the previous year. The highest death-rate was recorded in Muzaffargarh 43.48, Multan coming next with 41.52, Gujranwala 41.36 and Dera Ghazi Khan 40.85 and Montgomery 40.63.

The increased mortality in those districts in the province which showed a higher death-rate from fevers is attributable to the prevalence of malarial fever in an epidemic form in the last quarter of the year as the result of the excessive monsoon rainfall.

The highest death rates were recorded among infants under one year of age, the rates being 156·44 and 152·85 among males and females, respectively, children between 1 and 5 and old people coming next with rates of 65·28 and 72·35 and 66·05 and 68·78 in the case of males and females respectively. In the remaining groups the rate did not exceed 23·06 while the lowest recorded was 5·84.

The urban and rural death-rates from fevers were 21·46 and 26·91 compared with 14·87 and 19·90 in the previous year. These rates were lower than those in 1908 when they were 32·53 and 34·90. The three largest towns in the Punjab, Multan, Amritsar and Lahore recorded rates of 30·46, 29·95 and 25·89, respectively, as against 15·78, 13·57 and 21·13 in the previous year and 23·80, 68·16 and 33·69 in 1908. It will be observed that in Multan the death-rate was very high, even higher than in 1908 and the chief cause of this increase was the very exceptional rainfall for Multan which amounted to 19·83 inches against 6·25 inches in 1916. No such heavy fall has been recorded in Multan in the last 20 years for which period only are records available. The year 1897 shewed a heavy fall but even then it was only 12·55 inches and the death-rate from fever was 14·49. The high fever mortality rate extended to the whole of the Multan Division, and it is of common knowledge that the country to the south-east, Bahawalpur and Sindh, participated, if anything to a greater extent, in this disastrous result of an exceptional autumnal rainfall occurring in, what would be described, ordinarily, as an arid region.

The rainfall in Amritsar itself and its near vicinity was not very exceptional, it was 35·88 as against 30·88 in 1916, but it was spread much more evenly over the whole autumnal period and caused surface flooding which could not be absorbed or drained away with sufficient rapidity. Unfortunately too the sanitary condition of the town and its vicinity left very much to be desired at a time when it was so essential that the health of the people should be in a condition to resist the malarial infection. A special committee has been appointed by Government to consider remedies, additional to those already adopted, to protect Amritsar against repetitions of epidemics similar to those of 1908 and 1917.

In the case of smaller towns rates as high as 95·03 were recorded in Rajanpur, 78·41 in Kot Mithan, 70·51 in Dajal, 63·65 in Firozpur-Jhirka, 60·91 in Khangarh, 54·52 in Karor, 50·43 in Pakpattan, 50·21 in Shujabad, 49·36 in Begowala, 45·67 in Chuharkana, 44·19 in Kamalia and in Hafizabad, Sahiwal, Sohdra, Baghbanpura Bhogiwal and Kila Didar Singh, 43·89, 43·09, 43·08, 43·04 and 40·27, respectively. Firozpur-Jhirka in the Gurgaon District is in the midst of a rural centre which suffered very severely from malaria of a malignant type, mainly due to the flooding of the surrounding country, the result, it is said, of the bursting of protection bunds in the Alwar State.

In Simla 25 cases were reported from enteric fever—22 among Europeans and 3 among Indians. Of the 22 cases among Europeans 12 were imported and 10 were considered to have contracted the disease locally—of the latter 3 occurred at the Alexandra and 3 at the Grand Hotel while the remaining 4 occurred in different parts of Simla. No definite or common source of origin could be traced. Of the total 10 European indigenous cases, 7 were diagnosed as enteric fever, 2 as paratyphoid A and 1 paratyphoid B; under the first group 4 were returned as such on clinical grounds, the remainder after a bacteriological examination. Of the 12 imported cases 7 were of enteric fever and 5 of paratyphoid A. The 3 Indian cases were diagnosed on clinical symptoms only as of enteric fever; of these 1 case was imported. In Multan City 83 deaths from enteric fever were recorded during the year. The Civil Surgeon, Dera Ghazi Khan, states that in the beginning of the year a report was received from the police regarding the death of certain persons in 3 villages of Thana Kot Chutta in his district: on which he immediately proceeded to the spot and after enquiry he came to the conclusion that the 9 deaths that occurred had been the result of an outbreak of enteric fever. In March he received a similar report from Thana Batil and again came to the conclusion from an examination of the cases that the disease was enteric fever; he found it very difficult, however,

to obtain permission to make a satisfactory clinical examination and he was not allowed to take a specimen of blood. There were 14 deaths reported during the outbreak.

26. Dysentery and diarrhoea.—The total number of deaths from dysentery and diarrhoea amounted to 15,571 as against 15,551 in the previous year, the rate being 0·80 in each year. The quinquennial average was 0·64. Rates as high as 3·53 were recorded in Rawalpindi, 1·76 in Gurdaspur, 1·57 in Gurgaon, 1·51 in Sialkot, 1·50 in Amritsar and 1·26 in Simla, while in Hoshiarpur and Attock they were as low as 0·03 and 0·05.

The urban rate was 2·49 as compared with 2·29 for the previous year and the rural rate 0·64 as against 0·66.

The highest mortality occurred in October and the lowest in February. The largest death rates were returned from the towns of Kot Mithan 9·27, Zaffarwal 8·26, Isa Khel 8·01, Firozpur-Jhirka 7·17 and Pathankot 6·87.

With regard to the marked increase in the death rate at Murree, since the introduction of the water-supply and drainage, referred to in last year's report, it has been found to be impracticable to increase the pipe water-supply, but a scheme is being evolved by which the water storage will be increased in Murree itself. For this purpose the Municipal Committee are giving a site free of cost to enable the Military Department, by whom the pipe water-supply is administered, to build additional reservoirs. The control of the milk supply is a difficult question; it is however one which actively engaged the attention of the Municipal Committee. The number of hawking vendors' licenses has been curtailed in favour of the issue of licenses for sale within bazar limits only and it is hoped that this may have some effect in preventing the admixture of impure water to the milk.

The difficulties experienced in connection with the milk supply here are just as great in other hill stations in this province but it is probable that the people in those in which it is brought in from a distance, as in this, are better able to obtain good water to dilute the milk.

There is a proposal before Government for the routine chemical and bacteriological examination of water-supplies throughout the province which should do much to improve their purity and ensure that they are properly protected against accidental contamination.

27. Respiratory diseases.—There were 54,392 deaths recorded as due to respiratory diseases at a rate of 2·81 *per mille*, which is 0·22 more than last year and 0·43 in excess of the average for the previous five years. Gurdaspur was again conspicuous with its high rate of 13·7, while Amritsar, Simla, Ambala and Sialkot recorded rates as high as 6·4, 6·2, 5·3 and 5·1, respectively. The rates in the others varied between 0·3 in Montgomery and Muzaffargarh and 3·3 in Kangra.

28. Injuries.—There were 7,154 deaths due to injuries, the rate being 0·37, the same as it was last year, the deaths were classified as follows: suicide 255 (113 males and 142 females) wounds 499 (356 and 143), accidents 5,283 (3,062 and 2,221), snake-bite 894, injuries inflicted by wild beasts 18 and rabies 105.

29. All other causes.—Under the head all other causes there were 133,623 deaths recorded at a rate of 6·9 which is 0·2 less than last year but 0·4 more than the average for the previous five years. Gurgaon accounted for the highest rate 15·9 and Ludhiana for 11·8, Karnal and Ferozepore 10·0, Rohtak 9·7, while in Gurdaspur the rate was as low as 0·9 and Muzaffargarh, Dera Ghazi Khan, Rawalpindi, Mianwali, 2·9, 3·0, 3·5 and 3·9. The variation in these rates in different districts is due to misclassification.

30. Rabies.—The total number of patients from the Punjab that underwent *anti-rabic* treatment at the Pasteur Institute of India at Kasauli was 1,475 as against 1,151 last year. Of this number 124 were Europeans and 1,351 Indians. There were 8 deaths and 6 failures among Indians and in addition one case is still under enquiry, there were no deaths or failures among Europeans.

Section IX.—Sanitary Works.

31. The report on Sanitary Works during 1917 furnished by the Sanitary Engineer to Government, Punjab, is contained in Appendix B to this report.

Sanitary Works.

32. Only 50 village sanitary note books were supplied to the Civil Surgeon of Montgomery during the year.

Sanitary note books.

33. No rewards for sanitation were given to village communities during the year under report. The District Board, Gurgaon, has for the last few years regularly provided a sum of Rs. 500 in the budget for the purpose of giving rewards in connection with sanitation but as no village has ever attempted to improve its condition no such provision was made this year.

Rewards for sanitation.

34. The number of wells cleaned and parapets constructed fell from 7,640 in the previous year to 5,082 and from 1,316 to 531, respectively. The amount spent for the purpose was Rs 36,063 against Rs. 43,672 last year.

Cleaning of wells and construction of parapets.

In the Dera Ghazi Khan District 34 wells were cleaned by the owners and several in the Shahpur District by the people themselves. At Sargodha 3 new wells were constructed by private individuals and a tank in the area of village Dhamok on the road from Jaura to Jamali, where drinking water is very scarce, was cleaned and the cost met by the District Board and the people.

In the Ambala District the well on the Jagadhri-Shahabad Road at mile 33 and on the Abdullapur-Jagadhri Road near Chauki at mile 1 were cleaned by the District Board. The District Board also sanctioned a pucca well at a cost of Rs. 1,950 at Gopal Mochan (Tahsil Jagadhri).

35. An income of Rs. 1,39,082 was derived from the sale of street sweepings in municipal towns during the year as against Rs. 1,40,854 in the previous year. The largest sums were realized in Lahore, Amritsar and Sialkot.

Sale of street sweepings.

36. There were 1346.97 acres of land under sewage irrigation in the principal towns and Rs. 37,577 were realized for its use. There was an increase of 20.40 acres in land thus irrigated and a sum of Rs. 980 in the amount realized.

Land under sewage irrigation.

37. Very few attempts have been made to improve village sanitation. It is extremely difficult to get villagers to change their customs and habits, and until the people themselves show some inclination towards improvement it is hardly possible to help them. Sites near villages are invariably in a filthy condition and manure heaps are stacked in the vicinity of dwelling houses and drinking wells. It is true that when any infectious disease appears and a visit is paid by touring officers the sanitary condition is considerably improved for the time being, but almost immediately after the village reverts to its usual condition. When on tour some effort has been made by district officers to teach elementary principles. The five dispensaries itinerating in the Gurgaon District during the malaria season were made use of in spreading a knowledge of simple facts regarding the more common diseases and explaining the value of village sanitation, and it is hoped that in the future more use will be made of this agency.

Village sanitation.

The District Board of Gurgaon has framed simple rules in connection with the improvement of village sanitation which Ludhiana has also approved of and intends introducing into rural areas.

The Deputy Commissioner, Sialkot, reports that with the assistance of a grant from Government and of the District Board staff the town of Begowala has realigned two watercourses from the Aik which previously entered the town and were considered to be responsible for outbreaks of malaria; it is too early to say what effect these measures have had on the health of the town.

38. During the year 1916-17 the total number of municipalities in this province was 100, but notified areas were constituted at Baghbanpura, Bhogiwal, Ichhra and Samundri. The total income during the year, excluding the opening balance of Rs. 35,74,515 and "Extraordinary" and debts amounting to Rs. 3,24,736, was Rs. 75,50,946 and the total municipal expenditure on sanitation Rs. 26,37,318 as detailed below:—

Income and expenditure of municipalities.

	Rs.
(1) Water-supply	6,39,020
(2) Drainage	3,26,144
(3) Conservancy including establishment, road watering, latrines, etc.	8,45,246
(4) Health Officers and Sanitary Inspectors ...	62,982
(5) Vaccination	21,111
(6) Markets and slaughter-houses ...	62,389
(7) Roads	6,60,406
(8) Burning and burial of paupers ...	3,802
(9) Other sanitary requirements ...	16,218

The total income of District Boards, excluding opening balances, amounted to Rs. 78,39,562 and the expenditure on sanitation and vaccination Rs. 1,79,946.

The information regarding grants made for sanitary works is given in Appendix A appended to this report.

39. A list of works of public utility constructed during the year 1916-17 by private individuals at their own expense is given below:—

Works of public utility by private individuals.

AMBALA DIVISION—Hissar District.—A pucca well on Haluwas-Jonpal Road at a cost of Rs. 2,000 by Bhola Ram, son of Tensukh, Mahajan, Bhiwani. A pucca well in village Jeetwana Bas at a cost of Rs. 400 by Chandu, Lekhu Ram, son of Sawai, Chamar, of Sui, Tahsil Hansi. A pucca well in village Hetampura at a cost of Rs. 1,500 by Ballu, son of Sukh Ram, Mahajan, of Hetampura, Tahsil Bhiwani. A pucca well on Sirsa-Rori Road at a cost of Rs. 1,600 by Baggu, Nagar and Hardatta, sons of Setta Mal, Rota, of village Farma in Tahsil Sirsa. A pucca well in village Bapora at a cost of Rs. 5,000 by Kirori Mal, son of Johri Mal, Mahajan, of Bhiwani Lohar.

Gurgaon District.—A well at Losinghani at a cost of Rs. 550 by Lachhman, Rajput, of Losinghani, Tahsil Gurgaon. A drinking well at Gokalgarh at a cost of Rs. 1,500 by Kidar Nath and Jagan Nath, sons of Ganeshi, Dhusr, and Umri, son of Lachhmi Narain Sahai, Dhusr, of Rewari.

Rohtak District.—A pucca ghat on tank at Kahrawar at a cost of Rs. 3,500 by Lala Harbans Lal, son of Bhola Nath, Mahajan, of Kahrawar. A pucca well at Kahnour at a cost of Rs. 500 by Lala Kidar Nath, son of Bakhtawar, Mahajan, of Kahnour. A pucca well at Kahnour at a cost of Rs. 500 by Risaldar-Major Ghulam Ali Khan, of Kahnour. A pucca well at Binauli on Delhi-Baghat Road at a cost of Rs. 450 by Lala Radha Kishen, son of Prem Sukh, Mahajan, of Aterna. A pucca well on Bichpari-Gangana Road at a cost of Rs. 425 by Girdhari Dass, Chela of Manohar Dass, Beragi, of Bichpari. A pucca well at Nidana at a cost of Rs. 900 by Lala Dewak Ram, son of Mul Chand, of Dujana. A pucca well with Dharamsala on Jhajjar-Zahidpur Road at a cost of Rs. 1,200 by Pandit Uma Datt, Pleader, Jhajjar.

Karnal District.—One pucca bathing ghat at Samalki village at a cost of Rs. 808 by Mussammat Taro, widow of Shadi, Jat, of Samalki.

Ambala District.—Construction of a pucca well at Mullana at a cost of Rs. 500 by Shugan Chand, Patwari, Mullana. A pucca dharamsala and a well at Bitha at a cost of Rs. 5,000 by Debi Das, son of Dwarka Das, Brahmin, of Bitha.

JULLUNDUR DIVISION—Kangra District.—A pucca well on the Hamirpur-Nadaun, Road at a cost of Rs. 7,000 by Lala Wazira Mal, son of Lala Balia Mal, Khatri, of Nadaun, Tahsil Hamirpur. A kacha well in Tika Tandoli at a cost of Rs. 3,400 by Pandit Bhangan, son of Pandit Mutsaddi, of Narihana, Tahsil Dehra. A kacha-pucca well at Nurpur at a cost of Rs. 2,500 by Tika of Rani Garhwalia, of Gauler, Tahsil Dera. A pucca well at Gorli at a cost of Rs. 1,000 by Lalas Sita Ram and Balik Ram, sons of Mohan, Sud, of Nagrota. A pucca well at Bijuri at a cost of Rs. 800 by M. Devi Singh, son of Chandnun, Rajput, of Bijuri, Tahsil Hamirpur. A pucca well at Kalar at a cost of Rs. 200 by Qazi, son of Piro, Lohar, of Kalar, Tahsil Hamirpur. A pucca well at Kharyalta at a cost of Rs. 650 by Lalas Govindu, Nathu and Billa, etc., sons of Lala Kahna, of Kharyalta, Tahsil Hamirpur.

Hoshiarpur District.—A pipe water-supply for Dharmsal village at a cost of Rs. 2,000 by Nihalu Mal, son of Chiragh Mal, Sud, of Puragpur, Tahsil Dera, Kangra District. A pucca well at village Malewal at a cost of Rs. 200 by Mangan, son of Mali, Gujar, of Kirvewal, Tahsil Garhshankar.

Jullundur District.—A well near the school building at a cost of Rs. 450 by Jaimal Singh, Sarbarah Zaildar of Jamsher. A well at the village of Akalpur by Charagh Din, son of Nizam Din, of village Akalpur, Tahsil Nakodar. A well at a cost of Rs. 300 by Ishar Singh, Lambardar, son of Gulaba, Jat, of Kharkowal, Tahsil Nawashahr.

Ludhiana District.—A dharamsala and well at a cost of Rs. 1,500 by Karta Ram, son of Dhunkal Ram, Khatri, of Samrala.

Ferozepore District.—Two wells at Zira and Ratol Rohi at a cost of Rs. 60 each by Lala Mulla Mal, son of Dhanrau Mal, Sahukar, of Zira. A trough at the tahsil well at a cost of Rs. 375 by Lala Bul Chand, son of Lala Devi Ditta Mall, Rais, of Fazilka.

LAHORE DIVISION—Lahore District.—A drinking well at Kahna at a cost of Rs. 400 by Kirpa Ram, Head Constable, Police Station Kahna. A drinking well at Attari Sarupur at a cost of Rs. 200 by Mir Inayat Ullah, Sub-Inspector of Police, Kahna. A dewan-khana at Lakhoke at a cost of Rs. 2,000 by Muhammad Bakhsh, of Lakhoki, Tahsil Lahore. A drinking well at Hudiara at a cost of Rs. 200 by Sahu, son of Ditta, of Hudiara. A drinking well at Chunian at a cost of Rs. 1,000 by Sodhi Karam Singh of Chunian.

Gurdaspur District.—One pucca sarai at Darangla to accommodate travellers, etc., free of any charges at a cost of Rs. 5,000 by Pala Mal, son of Duna Mal, Sahukar, of village Dorangala, District Gurdaspur.

MULTAN DIVISION—Lyallpur District.—A drinking well for public use in Chak No. 62, R. B., Jaranwala Tahsil, at a cost of Rs. 600 by Ranga Singh. A drinking well for public use in Chak No. 57, G. B., Jaranwala Tahsil, by Bishen Singh, Zaildar, at a cost of Rs. 500.

Multan District.—A well at Tatepur Railway Station, Multan Tahsil, at a cost of Rs. 500 by the Hindu Panchayat of Multan City for the benefit of people on the occasion of the Budhla Sant and Makhdum Rashid fairs.

Section X.

40. I held the post of Sanitary Commissioner throughout the year, in addition to that of Inspector-General of Civil Hospitals. The post of Deputy Sanitary Commissioner was held by Major W. H. C. Forster, I.M.S., in addition to his duties of Professor of Pathology at the Lahore Medical College. Dr. Khawaja Abdur Rahman, M.B., Ch. B. (Edin.), D. P. H. (London), held charge of the appointment of Additional Deputy Sanitary Commissioner.

41. In January I inspected Sonepat and Amritsar, in March Montgomery, Multan, Muzaffargarh, Dera Ghazi Khan, Moga, Ferozepore and Mianwali, in April Simla and Hardwar. The latter in connection with the spread of cholera through the agency of pilgrims in the Punjab, about which I submitted a special report to Government. In May I inspected Jullundur, Khanna, Karnal, Kalka and the Tara Devi plague post. In July I inspected Amritsar in connection with an outbreak of cholera and then proceeded to Rawalpindi in company with Major Norman White, Sanitary Commissioner, India, to enquire into conditions that constituted it a focus for the spread of plague each year in the Province and to consider measures in regard to its prevention. In October I inspected the Dharmpur Sanatorium for persons suffering from tuberculous diseases, Sanawar, Ambala, Amritsar, Ludhiana and Simla, and in November Batala, Gurdaspur, Gurgaon and Rewari and in December Gujranwala.

42. During the cold weather Major W. H. C. Forster, I.M.S., was not able to undertake any touring as his time was occupied with lecturing work at the Medical College and in the supervision of the working of the Vaccine Institute. During the Medical College recess period he toured through 78 towns and villages of the Simla and Ambala Districts and in the Native States, Theog, Jubbal, Rampur, Bashahr, Kumhar sain and Keonthal, mainly for the purpose of inspecting the results of vaccinations performed with his Chloral Hydrate Lymph and the registration of births and deaths. During his tours he made use of such opportunities as presented themselves to bring home to the people and the officials of the States he visited the advantages to be derived by the observance of general sanitary measures.

Early in the year, under instructions from the Local Government, he accompanied the Sanitary Engineer to Government, as Sanitary Expert, to inspect the water supply and sewage works at Lucknow, Cawnpore and Benares (United Provinces) in connection with the proposed drainage scheme for Lahore. In April and May of the year under review at the request of the Inspector-General of Civil Hospitals, he enquired into the prevalence of Tubercle in the Punjab Lunatic Asylum. About the middle of October, he accompanied the Inspector-General of Prisons to Sargodha and Gujar Khan to select a suitable site for a Tuberculosis Jail for the Punjab.

43. During the second week of January 1917, Dr. K. A. Rahman, Additional Deputy Sanitary Commissioner, supervised the medical and sanitary arrangements of Muktsar Maghi Fair in the Ferozepore District and on the 21st of the same month started on his first tour of sanitary and vaccination inspection. By the middle of March he visited and reported on the sanitary condition of the towns of Sirsa, Hansi, Bhiwani, Tohana, Rewari, Hodal, Kunjah, Dingah and Jalalpur Jattan, at the same time inspecting vaccination and registration of births and deaths, as also of Fatehabad, Faridabad, Ballabgarh, Palwal, Hathin, Nuh and Sohna, and 196 villages of Hissar, Gurgaon and Gujrat Districts. From Gujrat he went to Pehowa in the Karnal District to supervise the medical and sanitary arrangements of the annual fair held there, and later on at Choya Saidan Shah and Katas. In May he made a sanitary and vaccination inspection of Wazirabad,

Rupar and Kamalia. During the last week of July he visited Amritsar, Jullundur, Ludhiana and Ambala to try and make arrangements to stock Chlorinated Lime for the disinfection of wells during the cholera season at the Central Disinfection Dépôt at Jullundur. From 16th August to 3rd October he visited Jagadhri, Buria, Multan, Lahore Cantonment, Amritsar, Sialkot and Pasrur to advise on outbreaks of cholera. As in previous years he dealt with the cholera enquiries and daily reports of the Province.

On 4th October he attended a meeting at Nankana Sahib convened by the Railway authorities to discuss more efficient facilities for the convenience of pilgrims, after which he visited the Phalgu fair in the Karnal District. In November he went to Fazilka and reported on the sale of municipal land in Mokalla Mehtab Ganj and from there proceeded to the Nankana Sahib to supervise the medical and sanitary arrangements of the fair. In December he made a sanitary and vaccination inspection of Jhajjar and Beri and inspected vaccination and registration of births and deaths in 24 villages of the Rohtak District.

44. Civil Surgeons made two hundred and thirteen inspections of towns and 1,240 of smaller towns and villages during the year as against 166 of towns and 1,726 of villages in 1916. Assistant Surgeons inspected 17 towns and 47 villages as compared with 50 towns and 321 villages in the previous year.

Inspection work of Civil Surgeons and Assistant Surgeons.

45. Quinine was distributed freely in the districts affected by malaria through Tahsildars, Zaildars, Lambardars, the Vaccination and Sanitary Staffs, itinerating dispensaries, special malaria gangs, local hakims and influential persons. In some districts pools, tanks, etc., were kerosined for the destruction of mosquitoes and in some the quininisation of school children was successfully carried out. The Municipalities of Lyallpur and Gojra distributed among school children 100,608 tablets of 3 grains each under the quininisation scheme with very good results. A few District Boards at their own expense distributed leaflets on "Malaria fever" issued by the Chief Malaria Medical Officer, Punjab, for the guidance of the public, the District Board, Lahore, alone issued 10,000 copies of these leaflets.

Free distribution of quinine.

In the Muzaffargarh District large quantities of quinine in powder and tablets of 5 and 3 grains were distributed by the District Board and Municipalities free of charge among the poorer classes. The District Board, Amritsar, distributed quinine free to villagers through the Sub-Committees of the Amritsar District Quinine Distribution Association.

In the Amritsar city school children were dosed with quinine during the malaria season on a large scale, 110,370 tablets of quinine being distributed gratuitously by the Municipal Committee from the 6th January to 11th November and the Amritsar Temperance and Ratepayers Associations in addition to distributing quinine freely supplied milk gratis to the poorer people.

In the Gujrat District and city quinine and milk were distributed gratuitously by Shaikh Azmat Ullah, Lala Kidar Nath, Seth Chiragh Din and M. Muhammad Din, the District Board gave away 100 lbs. of the drug and in the town of Dingah subscriptions were raised for this purpose. In the town of Ferozepore quinine was distributed freely to people in receipt of an income up to Rs. 15 per mensem while others were allowed to buy it at half price. In the district quinine to the value of Rs. 215 was sold to Zamindars during the year by the District Board, Ferozepore, none was distributed gratis except at dispensaries.

In the Municipal towns and villages of the Hissar District, Compounders distributed quinine tablets from house to house gratuitously to the extent of about 100 lbs.

46. It was not possible to do much in the way of filling up depressions, owing to financial stringency but still in some towns and districts gangs were employed for the purpose notably at Amritsar, Rohtak, Gurdaspur, Gujrat, Jhelum and Mianwali.

47. The Deputy Sanitary Commissioner remained *ex-officio* Professor of Hygiene at King Edward Medical College, Lahore, throughout the year and delivered the prescribed course of lectures and demonstrations on Hygiene to the M. B. B. S. Class.

48. During the cold weather 9 classes were conducted at the Punjab Vaccine Institute in the principles of Elementary Hygiene, chiefly for District and Municipal vaccinators. A total number of 64 vaccinators (63 of the district staff and one Superintendent of Vaccination from Nabha State), attended the classes and were given the customary certificates on conclusion of their course.

49. The Agent, North-Western Railway, reports that the towns of Mian Channu, Chichawatni, Khanewal, and Jaliania have been laid out in the vicinity of North-Western Railway stations and construction is in hand.

50. The municipalities of Ludhiana and Sialkot have not yet obtained the services of Health Officers, arrangements are being made to secure qualified men on higher pay.

The usual class for Sanitary Inspectors was held in the cold weather. At the examination held at the end of the course 23 passed and were granted certificates.

51. The annual grant of Rs. 200 which has been given to the Society for Promoting Scientific Knowledge, since 2nd October 1911, was increased by Government from the 1st April 1917 to Rs. 1,000 per annum. The Sanitary Board gave a grant of Rs. 23,139, towards the erection of a building and equipment of a building consisting of a lecture hall to accommodate 500 persons, offices, class rooms and sanitary museum, while the site was given by the municipality on a nominal rental. The building was completed and opened in November 1917.

At Lahore 14 lectures for the general public and 9 for women and children were delivered and a conversazione with experimental demonstrations on a large scale was held in January 1917. An "Our Day" was celebrated in December when, in addition to interesting scientific experiments and exhibits, demonstrations were arranged of Infant Welfare Work, Home Nursing, and First Aid for Indian Ladies. In addition to lectures delivered at Lahore and other towns, where there are branches of the Society, a number were given in villages by members of the Sanitary League, a special organisation formed for reaching rural populations.

Classes in First Aid, Home Hygiene and Nursing have been held regularly and certificates granted to successful candidates as follows:—302 in First Aid, 11 Home Nursing and 293 Home Hygiene and besides 5 persons obtained labels, 13 medallions and 6 vouchers.

Pamphlets in Urdu, Hindi and Gurmukhi dealing with the prevention of epidemic diseases and a Hindi translation of a book dealing with the bringing up of children besides the "Raushni," the Society's monthly journal, were published and distributed. Very good work was done in the Vernacular Continuation Classes for women and also in the weekly Lantern lectures for women and children.

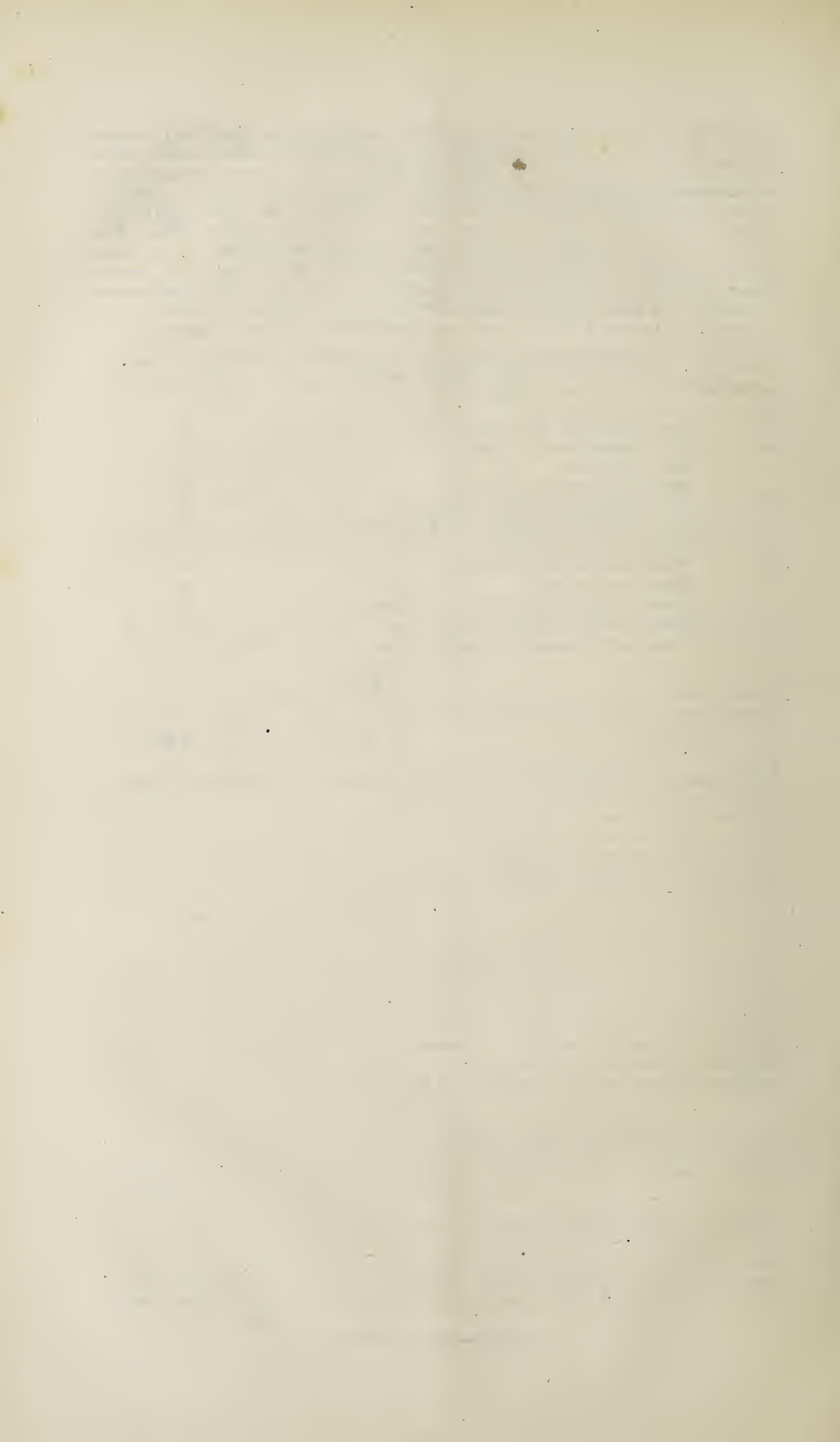
52. As previously stated the Additional Deputy Sanitary Commissioner attended and advised on the arrangements made at Muktsar Maghi fair at which there was an attendance of 40,000 to 50,000 people, the Pehowa fair with an estimated attendance of from 60,000 to 70,000, the Phalgu fair at which there were about 60,000 people, and the Nankana to which only about 40,000 came. The Civil Surgeon of the district made the sanitary arrangements for and attended the Pakpattan fair but this year owing to the late rains and prevalence of malaria and possibly to the dismantling of the Line only 2,500 persons attended. At none of these fairs was there any outbreak of disease of an infectious nature and the sanitary arrangements were reported as satisfactory.

53. As the Provincial Laboratory of the Punjab, the Pasteur Institute at Kasauli reported on the specimens noted below :—

Serum diagnosis for typhoid fever	...	...	61
Serum diagnosis for paratyphoid (a) }	...	...	99
Serum diagnosis (b) }	...	...	28
Serum diagnosis Malta fever	...	...	27
Examination of blood for malaria	...	...	26
Examination of sputum, etc., for tubercle bacillus	...	...	34
Examination of tumours	...	...	136
Wasserman test for syphilis...	...	...	48
Miscellaneous tests	...	...	371
Examination of brain for negri bodies	...	...	182 doses.
Vaccines, etc., sent out	...	...	548 „
Autogenous vaccine sent out	...	...
Total	...	...	1,560

LAHORE :
The 15th May 1918. }

H. HENDLEY, COL., I.M.S.,
Sanitary Commissioner, Punjab.



APPENDIX A.

PROCEEDINGS OF THE SANITARY BOARD, PUNJAB.

The constitution of the Board has not varied since last year. I held the post of Secretary to the Board throughout. The Board met 5 times, twice in Lahore, twice in Simla and once in Montgomery.

The balance of Rs. 1,39,768 was fully utilized—

				Rs.
1.	Karnal Drainage Scheme	...	...	44,104
2.	Sillanwali Drainage Scheme	...	...	29,410
3.	Kotli Loharan Drainage Scheme	...	...	4,100
4.	Pipe Line at Chitti Dill Bungalow	...	...	594
5.	Sankhatra paving and drainage	...	...	950
6.	Roras paving and drainage	...	...	248
7.	Rewari Water-Supply Extension Scheme	...	...	60,000
8.	Mitranwali notified area paving and drainage	...	...	362
Total				1,39,768

A fresh grant of 4 lakhs was placed at the disposal of the Sanitary Board for allotment during 1917-18, and from this the following grants were made up to 31st December 1917, leaving a balance of Rs. 3,69,494 which will be accounted for in the next year's report. It may be mentioned, however, that the whole of the grant of 4 lakhs for 1917-18 was fully utilized as also a sum of Rs. 84,111, out of the additional grant of one lakh placed at the disposal of the Board :—

				Rs.
1.	Gojra Drainage Scheme	...	...	2,767
2.	Construction of bridge and Khal at Begowala in the Sialkot District.	...	...	2,000
3.	Campbellpur Drainage Scheme	...	...	4,000
4.	Drainage scheme of Nonar town, Sialkot District	...	...	700
5.	Dera Ghazi Khan Water-Supply Extension Scheme	...	...	19,689
6.	Sullage farm at Lyallpur	...	...	1,350
Total				30,506

The schemes noted below were approved by the Board and administrative sanction accorded in each case—

				Rs.
1.	Karnal Drainage Scheme	...	...	88,268
2.	Sillanwali Drainage Scheme	...	...	58,820
3.	Ambala Water-Supply Extension Scheme	...	...	19,241
4.	Lahore Water-Supply Extension Scheme	...	...	37,269

The Board accorded revised administrative sanction to the schemes noted below—

				Rs.
1.	Gojra Drainage Scheme	...	...	12,972
2.	Wazirabad Drainage Scheme	...	...	79,219

The following schemes were approved by the Board and recommended to Government in the Public Works Department, Buildings and Roads Branch, for technical sanction :—

	Rs.
1. Wazirabad Drainage Scheme	79,219
2. Ambala Water-Supply Extension Scheme	90,710

The Government in the Civil Department accorded revised administrative sanction to the Rewari Water-Supply Scheme.

The following schemes were approved by the Board and recommended to Government in the Public Works Department, Buildings and Roads Branch, for technical sanction :—

	Rs.
1. Sultanwind Drainage Scheme	17,517
2. Ambala Water-Supply Extension Scheme	90,710
3. Kalka Drainage Scheme	35,531
4. Constructing a new chimney to the boiler house in connection with Ambala Water-Supply Extension Scheme	19,241

Government in the Public Works Department, Buildings and Roads Branch, accorded revised technical sanction to the schemes noted below :—

	Rs.
1. Boring plant for experimental tube well at Pasrur (Sialkot District).	8,208
2. Wazirabad Drainage Scheme	79,219
3. Rewari Water-Supply Extension Scheme	3,15,873

The Government in the Public Works Department refused to accord revised technical sanction to the Dalhousie Water-Supply Extension Scheme as the work had been completed before application was made.

The sphere of the work of the Board has extended to a more considerable extent as Government referred a number of cases for its opinion which required very considerable deliberation and discussion.

The annual grant of Rs. 200 to the Society for promoting scientific knowledge was enhanced during the year to Rs. 1,000 to assist the Society in propaganda work especially in rural areas.

The Board fully discussed the suggestions made by the Sanitary Engineer to Government, Punjab, as to the maintenance of sanitary works by local bodies and other officers in connection with the working of municipalities, and the conclusions arrived at by the Board were forwarded to the Government for consideration and necessary action.

The Board also considered the advisability of framing rules, similar to those in force in the United Provinces, in regard to projections and tharads and its recommendations are under the consideration of Government.

The Board, this year, went into the question of dealing with the drainage of flooded or waterlogged areas in the province and it requested the Sanitary Engineer to Government, Punjab, to report on the flooding of the Gurgaon and Rohtak Districts, due to the heavy monsoon of the previous year.

The question of restricting the growing of irrigated crops within the Montgomery Municipality was sent by Government, to the Board for opinion; and a meeting was held to discuss it on the spot. The conclusions arrived at after very considerable discussion in which several selected officers took part, were forwarded to Government for consideration.

The Board is on the whole satisfied that there has been some advance in a demand for the sanitation of villages and it has to thank Mr. Abbott, Deputy Commissioner at Sialkot, for affording valuable examples of this in his district, where a number of small schemes of improvement have been carried out with funds partly provided by the localities concerned.

APPENDIX B.

ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT,
PUNJAB, FOR THE YEAR 1917.

The post of Sanitary Engineer was held by Mr. A. R. Astbury throughout the year.

Lahore.—The final sanitation project prepared by Messrs. Lane Brown and Hewlett, Consulting Engineers, estimated to cost 48½ lakhs of rupees was approved by me subject to a technical note. The project now awaits the approval of the Sanitary Board, Punjab. Minor drainage extension to Lahore was carried out at a total cost of a little over Rs. 14,000.

Amritsar.—One new Babcock and Wilcox boiler has been installed in place of the No. 3 boiler that was condemned. The other two boilers have been provided with new drums. The working pressure has now been increased from 80 to 120 lbs. per square inch and more economical pumping should result.

The Brownlie tubes sunk in 21 of the existing percolation wells were tested and found to be working quite satisfactorily. It seems unlikely that it will be necessary to sink more tubes for many years to come. The present daily supply is about 1,250,000 gallons and to provide this Mr. Jarman (the Municipal Engineer) finds 15 or 16 of the wells, provided with tubes, to be enough. This has enabled him to cut off the plain percolation wells and the city now receives the greater part of its water from deep strata.

The number of house connections was increased by 281 and 44 new metered supplies were fixed.

Dhab filling.—This was completed in September. If plenty of earth were to be had a great deal more filling could be done with great advantage.

Dhobi Ghât.—The Municipal Dhobi Ghât near the Gheemandi Gate is a great success. It is supplied with fresh clean water from a tube well sunk alongside. The annual income is Rs. 1,800 and the total working expenses, including depreciation, comes to Rs. 1,100 showing an annual profit of Rs. 700.

Conservancy Tramway.—This has been in constant work during the year and the three locomotive engines have given better results since the introduction of the night gang for doing running repairs. Negotiations are in hand for the purchase of two second hand locomotives from the Canal Department, and it is hoped the purchase will be completed in the new year as the quantity of refuse is increasing and additional power is necessary to cope with the quantity.

Mr. Jarman is congratulated on the successful working of the sanitary services under his control.

Simla Water-Supply Extension.—The estimates for laying new mains from 17 stream to Sanjauli for Rs. 1,08,394, and (2) constructing new filter beds at Dhali for Rs. 1,24,811 have received the final technical sanction of the Local Government in the Public Works Department. Several minor improvements and extensions to the Simla Water-Supply and Drainage System have been carried out at a cost of Rs. 8,443.

Jullundur.—The detailed project amounting to Rs. 5,37,346 for the surface drainage of the town was prepared in this office and submitted for the technical sanction of the Local Government in the Public Works Department. In connection with this scheme an experimental tube well is being sunk in the Empress Gardens. If successful, it will serve as a means of flushing the drains, and until the drainage system is complete, the well can be used for irrigating the gardens. The experiment will also indicate whether a tube-well system is likely to be suitable for the water-supply of Jullundur.

Kalka Drainage Scheme.—Estimated cost Rs. 36,531. The work was started on 16th November 1917. Progress has been slow owing to the difficulty experienced in obtaining coal for brick manufacture. Expenditure to the end of the year was Rs. 4,841.

Rupar Drainage Scheme.—Estimated cost Rs. 37,852. The work was started in November last. This year disposal works and a few drains have been constructed. The flushing tank has been built and the material for other parts of the work has been collected. The work would have been further advanced had not the difficulties in obtaining coal checked the progress.

Dera Ghazi Khan Water-Supply Extension.—Estimated cost Rs. 1,65,617. Very fortunately the pumping machinery arrived safely from England. It has now been erected and has passed the official tests. The reservoirs and engine house have been completed. These water works are causing considerable anxiety owing to the tendency of the tube well strainers to choke. The causes have been under investigation and are believed to be due to the deposition of calcium carbonate. The water is excessively hard and contains carbonic acid gas in solution. The suction of the pump is believed to cause the carbonic acid gas to be

evolved, and the loss of gas in solution causes the deposit to occur. Attempts are being made to prevent the deposition accumulating by inserting a water jet inside the strainer and causing a back-flow daily after pumping ceases.

Shujabad Drainage Scheme.—Estimated cost Rs. 15,302. Except for the burning of some special bricks the work has not yet been started. The project is being revised by the Executive Engineer, Multan, in accordance with technical instructions from this office.

Rawalpindi Supplementary Intramural Drainage Scheme.—Estimated cost Rs. 92,368. This work has been completed so far as funds are available. About half the work has been done.

Nurpur Fair Area Water-Supply.—Estimated cost Rs. 25,275. The work has not been started yet. The estimate no longer represents the probable cost owing to the rise in price of imported water works stores. Modifications of the scheme are being worked out.

Lyallpur Water-Supply Extension.—Estimated cost Rs. 1,55,530. The estimate was sanctioned during 1916 and work started on 22nd July 1916. The high level tanks clear water reservoir and extension for the storage tanks and pipe line throughout has been completed at a total expenditure of Rs. 86,321. The power-pump has to come from England, and so far it has not been granted a priority certificate. There seems little chance of getting the pump until after the war. Until it arrives the steam-plant and the old worn-out power plant will have to carry on.

Eminabad Drainage Scheme.—Estimated cost Rs. 31,751. Expenditure to the end of the year was Rs. 18,773. The whole of the extramural drainage, disposal works, etc., flushing arrangements have been completed with the exception of the oil engine for lifting water for flushing the drains. The remaining work of intramural drains and pavements has not been put in hand and awaits deposit of the balance Rs. 9,251 by the Municipal Committee.

Wazirabad Drainage Scheme.—Estimated cost Rs. 79,219. The whole of the extramural and the intramural drainage, flushing installation, etc., were completed except one collecting tank at the disposal works which could not be started owing to a rise in the spring level. The material of the tank is at site and nothing can be done in this connection until March 1918 when it is hoped that the sub-soil water will sink sufficiently to allow of the work being completed. Expenditure to the end of the year was Rs. 71,704.

Bhera Drainage Scheme.—Estimated cost Rs. 78,682. The work consisted chiefly of the filling of depressions round the town and leading away the storm water by means of a *kutchra* outfall channel to low-lying ground about 6 miles from the town. The Executive Engineer reports that the work has already been of great benefit, malaria having diminished and foul water being speedily removed. It is hoped that the local body will realise the great importance of keeping the storm channel clear of weeds and silt. The work has practically been completed.

Rewari Water-Supply.—Estimated amount Rs. 3,15,873. Total expenditure Rs. 2,04,398. Work was started by the District Engineer, Gurgaon, in July 1916 during which year all the distribution mains were laid and most of the work of sinking the supply wells, building staff quarters and engine house was carried out. Owing to abnormal floods of the monsoon of 1917 and subsequent rise in the spring level the progress was less than expected. Much time was occupied in clearing the wells of the silt brought down by the floods. The masonry entablature has been finished and rivetting of the steel tank is in progress. Boring with 6 inches pipe has been done in wells Nos. 1 and 2; sinking of all the four supply wells has been finished; engines and pumps have been fitted and trenching for laying the suction main has been started.

Ambala Water Works.—The excessive monsoon of 1917 caused a sudden rise in the level of the sub-soil water at Handesra, and Ambala suffered a temporary breakdown in the water-supply as the sub-soil water rose 6 inches above the pump room floor and the condenser air-pump and the boiler feed pump were completely submerged. The supply was reopened with great difficulty about 70 hours after the forced stoppage of the main pumps. A pulsometer was attached to the suction air vessel and a makeshift pipe line was built up from odd pipes which were procured from various sources. These makeshift arrangements still continue as the sub-soil water level has not yet dropped far enough to enable the pumps to be started again. This is a curious example of a breakdown through too much water being at the headworks. The sub-soil at Ambala contains much more clay than is usually found in the Punjab alluvium and this renders a supply from percolation wells erratic and uncertain. Some experimental boring work has been undertaken near the Tangri river to try and find a more favourable sub-soil.

Dalhousie. Improvements to Water-Supply.—Sanctioned estimated cost Rs. 15,903. Work has been completed at a total cost of Rs. 14,600.

Gurdaspur Intramural Drainage Scheme.—Estimated cost Rs. 8,324. The work has practically been completed and the improvement to the town is very noticeable.

The survey staff attached to this office has been fully employed on schemes required by local and military authorities. For the Sadr Bazar of Lahore Cantonments I have been asked to prepare a scheme of surface drainage and a water-supply system. I have also been asked to enquire into and report on the working of the storm drainage of Lahore Cantonments. The Military authorities have also asked me to prepare a scheme of surface drainage for the large Sadr Bazar of Ferozepore. I have submitted a report to the Military authorities on the improvements required to the Bhed Nala in Sialkot Cantonments. The following rough and fair schemes were approved for which survey and levelling was done and the projects subsequently worked out in detail in this office :—

<i>Rough Estimates.</i>			
	Rs.		Rs.
1. Panipat Drainage Scheme (revised in this office)	60,701		
2. Gojra Drainage Extensions	12,972		
3. Chuharkana market town water-supply	21,037		
4. Extending brickwork carriers, Government House, Lahore	1,032		
5. Protection of Muktsar town from flood	52,195		
			1,47,937
<i>Fair Estimates.</i>			
	Rs.		
1. Jullundur Drainage	5,37,346		
2. Gojra Drainage Extension	13,023		
3. Experimental tube well for water-supply, Gujranwala	8,449		
4. Sargodha Water Works Extension	1,84,364		
5. Tibba Jalian Drainage (Sialkot town)	4,516		
			7,47,698
Total			8,95,635

The total cost of the out-door establishment, including draftsmen employed on the preparation of plans for these schemes, comes out to Rs. 4,919 for the year and works out at about 0·55 per cent. on the total cost of the above schemes.

The projects, both rough and fair, prepared by the Executive Engineers in the Public Works Department or the local engineering staff that received technical approval of this office, were 40 in number at a total estimated cost of Rs. 12,28,167. In order to secure continuous specialised control over the working of the three small sewage disposal installations in Lahore, namely—

Government House,
Queen Mary's College,
King Edward Memorial,

a Sanitary Sub-Division was sanctioned by the Local Government and included in the Sanitary Circle of Superintendence.

During the year I visited Gurdaspur, Simla, Rawalpindi, Lahore, Shujabad, Multan, Dera Ghazi Khan, Kalka, Kasauli, Sanawar, Dharampur, Gujar Khan and Montgomery.

Various sanitary schemes completed or in progress were also inspected by my Personal Assistant and the Sub-Divisional Officer, Sanitary Sub-Division, and advice given in the form of inspection notes. In addition to my duties as Sanitary Engineer I held charge of the office of the Under-Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, from 12th July 1917 to the end of the year. This was necessitated by the great shortage of officers in the Buildings and Roads Branch owing to the heavy proportion of officers on military duty. The accompanying statement shows water pumped at the various water works in the province, together with cost of pumping.

STATEMENT A.

STATEMENT OF WATER PUMPED AND USED IN THE WATER WORKS STATIONS, SIMLA, LAHORE, AMBALA, AMRITSAR, SARGODHA, LYALLPUR, LUDHIANA, SIALKOT, DERA GHAZI KHAN, TOBA TEK SINGH, GOJRA, PIND DADAN KHAN, JARANWALA, RAWALPINDI AND MURREE AND COST OF PUMPING, 1917.

No.	Name of Water Works.	Population supplied, number.	Water used daily average, gallons.	Daily consumption per head in gallons.	Lift including friction in feet.	Daily hours of pumping average throughout year.	Average pump, horse power during the year.	QUANTITY AND COST OF FUEL USED PER ANNUM.		Coal or oil consumption per horse power hour.	Cost of small stores and establishment at pumping station.	Total cost of fuel, small stores and establishment.	Cost of pumping per horse power hour.	Original level average of water surface in all the wells.	Average of water surface level below ground level of all the wells in 1917.	REMARKS.
								Wood or electric current units.	Coal cost.							
1	Simla ...	80,316	Cherot 142,994 ; Chair 18,463 ; Gravitation and Reservoir 202,219 361,785	1,193	Cherot 1,800 Chair 2,800	7	129.4	500,910 units; cost Rs. 15,653	..	..	8,529 0 0	24,182 0 0	1.17	..	..
2	Lahore ...	208,126	2,833,556	13.51	128	17.4	103.6	20 maunds Rs. 13 12 0	895 tons Rs. 14,096	30,000	Stores 3,246 0 0 Establishment 9,372 0 0	26,727 12 0	7.6 pies	677	winter 677 summer 674	
3	Ambala	24,491	219,286	8.5	75'	24	3.5	Wood 331.45 tons, Rs. 3,579	75.22 tons, Rs. 1,353	...	Establishment 4,973 0 0 Stores 2,992 0 0	12,897 0 0	0 6 8	23' to 24'	22' to 22.39"	
4	Amritsar	140,697	1,419,303	10.09	88'	14	22 H. P.	...	23,238 mds., Rs. 18,434.7-6	8.2 seers	7,894 3 8	21,328 11 2	0 1 7	8.8"	7.5"	

5	Sargodha	...	12,000	106,360-8	8-86	83'	13'78	3-20	Wood 359 mds., Rs. 193-13-9	4,006 mds., Rs. 2,565-15-7	...	Establishment 433 8 9 Stores 2,742 4 4	5,935 10 5	0 5 11	...	...
6	Lyalpur	...	19,578	250,531	12-8	65	14-4	5-71	Wood 135 mds., Rs. 60-12-0	3,700 mds.,= Rs. 2,485-15-0	...	3,538 13 8	6,085 8 8	0 2 7	...	...
7	Ludhiana	...	44,170	486,116-1	11	95-5	14-1	16-4 I. H. P.	Wood 83 mds. 10 seers, Rs. 72-7-0	Tons 343-9-3 Rs. 5,324-0-10	...	Establishment 3,022 9 11 Stores 5,226 7 6	13,635 9 3	0 2 7	North ... 28' South ... 31'	North...27'15" South 30'-10"
8	Sialkot	...	52,800	388,137	7-35	135	8 Hours	32-7 H.P.	110 mds., Rs. 139	357 tons., Rs. 6,089-2-3	5 lbs. per H. P.	Establishment 5,757 8 5 Stores 532 4 0	12,499 14 8	0 2 1	784-25	780-69
9	Dera Ghazi Khan	...	17,000	67,416	3-96	26-6	10-6	10 B. H. P.	Kerosine oil, Rs. 1,770-14-6	...	...	Small Stores 161 0 0 Establishment 1,210 0 0	...	0 1 2-3	376-9	...
10	Toba Tek Singh	...	3,009	121,360	40-3	45	11-8	2-3	1,535 (cost of oil)	...	...	888 0 0	2,723 0 0	0 4 6	...	...
11	Gojra	...	5,500	24,800	4-5	32'	3½ Hours.	1-14	...	410	Crude oil 4 seers per hour	Small stores 2 0 0 Establishment 730 0 0 daily. 2 0 0	Small stores 730 0 0 Establishment 410 0 0	1 4 6	Water is obtained from Canal Rajbaha.	10
12	Pind Dadan Khan	...	10,590	14,178	1-38	61'	10	0-43	48 mds., Rs. 38-8-0	Tons 177-2-0 Ls. 2,460-14-0	253 lbs.	1,386 0 0	3,885 6 0	2 7 7	12	...
13	Jaranwala	...	3,000	45,000	15	30'	7½	6	...	K. oil 1,796 gas. Rs. 577-11-6	87 pints	Establishment 8,779 8 4 Stores 2,364 10 8	3,244 3 0	0 3 2	...	...
14	Pawalpindi	...	...	420,758	...	118'	9	27-85	...	Coal 411 13-2-14 Cost Rs. 7,706-13-0 Wood 91½ mds. Cost Rs. 68-7-0	Coal con- sumption 10-07 lbs.	3,189 5 0	10,964 9 0	1-91 annas	11'-5½"	10'-3"
15	Murree	...	...	88,000	...	104'	6	3-45	Wood 80 mds.	...	1½ mds. of wood.	7 0 0	29 0 0	0 4 0	...	...

These figures
appertain to
the period
from
13th
August 1917
to 31st De-
cember 1917.

APPENDIX C.

Statement showing the death rates from cholera, small-pox, fevers and dysentery and diarrhoea for the five years preceding and for the period since the introduction of drainage or water-supply or both in the undermentioned towns.

Towns.	DATE OF COMPLETION OF WORKS OF		AVERAGE ANNUAL DEATH RATE SINCE THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY, OR BOTH.				AVERAGE ANNUAL DEATH RATE FOR THE FIVE YEARS' PERIOD PRECEDING THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY, OR BOTH.				REMARKS.
	Drainage.	Water-supply.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	
1	2	3	4	5	6	7	8	9	10	11	12
Ambala ... ..	...	1895	0·5	0·4	12·3	3·6	0·5	0·4	19·3	6·4	
Simla	1893	1893	0·02	0·4	13·0	0·8	...	1·1	17·1	1·4	
Ludhiana	1895	1909	0·4	0·6	14·9	1·8	0·4	2·7	20·8	1·6	
Jagraon	1907	...	0·7	1·3	11·6	1·6	0·6	1·5	9·3	2·0	
Ferozepore	1916	...	0·6	0·6	11·2	1·4	0·2	0·7	9·8	1·1	
Zira	1913	...	0·8	2·3	13·7	0·7	0·3	4·0	16·6	0·9	
Fazilka	1913	...	1·1	1·5	20·1	2·0	2·2	2·6	21·4	1·7	
Lahore ... ..	...	1881	0·8	0·7	17·0	1·7	1·9	1·6	27·8	2·3	
Amritsar	1885	1904	0·7	1·2	22·6	2·1	0·4	0·7	31·3	1·8	
Gurdaspur	1914	...	0·2	0·1	14·6	3·4	0·8	0·5	13·2	2·6	
Dalhousi ... ..	...	1894	0·1	0·1	11·7	2·0	...	...	9·6	2·4	
Pathankot	1915	...	1·1	0·03	15·3	5·6	0·8	0·7	12·4	2·8	
Sialkot ... ..	...	1915	1·2	...	11·7	3·3	3·0	1·2	9·6	2·3	
Gujranwala	1892	...	0·6	0·6	17·3	1·3	0·5	0·6	19·7	1·7	
Gujrat	1906	...	1·0	0·3	18·0	2·0	0·3	0·2	16·9	1·9	
Bhara	1917	...	...	...	15·5	1·8	0·03	0·7	17·8	1·7	
Sargodha	1907	1907	...	0·2	4·4	0·3	Not available.				
Jhelum	1908	...	0·1	0·4	10·9	1·8	1·5	0·3	14·0	2·1	
Pind Dadan Khan	1909	1909	0·1	0·9	21·4	3·6	1·1	0·7	23·1	3·6	
Rawalpindi	1907	1887	0·5	0·3	18·7	2·3	0·5	0·1	16·4	3·4	
Murree ... ..	...	1894	0·1	0·1	16·4	2·2	0·7	0·4	14·8	0·9	
Mianwali ... ..	...	1904	0·2	0·7	20·5	2·3	Not available.				
Lyalpur	1904	1904	0·1	0·7	11·2	0·8	*2·8	*0·4	*16·3	*2·1	
Gojra ... ..	...	1916	...	...	4·6	0·5	†	†	†0·5	†	
Multan	1907	...	0·3	0·8	19·0	2·4	0·01	1·9	16·9	2·4	
Dera Ghazi Khan ... ..	...	1913	...	0·6	16·0	2·3	2·0	0·6	15·9	1·6	
Kalka ... ..	...	1890	0·4	0·1	13·5	2·3	1·7	0·2	15·2	3·9	

*Figures available for four years only.

†Figures for 1914 and 1915 only.

ANNUAL FORM No. I.

STATEMENT SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE
PUNJAB DURING THE YEAR 1917.

Number.	2	3			4			5			6	7	8	9			Number.
	DISTRICTS.	POPULATION ACCORDING TO CENSUS OF 1911.*			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.			
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.				Males.	Females.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	AMBALA DIVISION.																
1	Hissar ...	438,458	266,431	804,889	20,805	19,023	39,828	25·8	23·6	49·5	109·4	14·6	...	25·3	23·5	48·8	1
2	Rohtak ...	385,401	329,433	714,834	20,696	18,917	39,613	29·0	26·5	55·4	109·4	24·2	...	26·9	24·7	51·6	2
3	Gurgaon ...	389,215	339,952	729,167	20,659	19,065	39,724	23·3	26·1	54·5	108·4	2·5	...	25·4	23·6	49·1	3
4	Karnal ...	437,698	362,089	799,787	21,593	20,119	41,712	26·9	25·2	52·2	107·3	20·1	...	26·3	24·1	50·4	4
5	Ambala ...	357,470	275,683	632,553	14,781	13,526	28,307	23·4	21·4	44·8	109·3	8·1	...	23·1	21·6	44·7	5
6	Simla ...	22,015	12,955	34,970	409	366	775	11·7	10·5	22·2	111·7	...	4·1	11·1	9·8	20·9	6
	JULLUNDUR DIVISION.																
7	Kangra ...	398,401	368,285	766,686	14,593	13,610	28,203	19·0	17·8	36·8	107·2	6·0	...	19·2	18·0	37·2	7
8	Hoshiarpur ...	501,510	417,059	918,569	20,722	19,491	40,213	22·6	21·2	43·8	106·3	14·9	...	21·8	20·2	42·0	8
9	Jullundur ...	440,599	347,357	787,956	19,215	17,910	37,125	24·4	22·7	47·1	107·3	18·4	...	23·3	22·2	45·5	9
10	Ludhiana ...	293,531	223,651	517,192	14,058	13,360	27,418	27·2	25·8	53·0	105·2	21·8	...	22·8	21·2	44·0	10
11	Ferozepore ..	520,868	412,631	933,499	24,903	22,687	47,590	26·7	24·3	51·0	109·8	19·3	...	26·5	24·1	50·6	11
	LAHORE DIVISION.																
12	Lahore ...	581,498	436,244	1,017,742	26,533	24,297	50,830	26·1	23·9	49·9	109·2	10·4	...	25·5	23·0	48·6	12
13	Amritsar ...	495,533	383,778	879,311	23,789	22,060	45,849	27·1	25·1	52·1	107·8	8·5	...	26·3	24·2	50·5	13
14	Gurdaspur ...	466,115	368,446	832,561	21,355	19,569	40,924	25·6	23·5	49·2	109·1	11·0	...	24·7	23·0	47·7	14
15	Sialkot ...	530,755	432,524	963,279	23,714	21,889	45,603	24·6	22·7	47·3	108·3	5·2	...	25·1	23·0	48·1	15
16	Gujranwala ...	518,251	405,168	923,419	20,158	17,860	38,018	21·8	19·3	41·2	112·9	...	7·9	24·0	21·3	45·3	16
	RAWALPINDI DIVISION.																
17	Gujrat ...	400,586	345,038	745,634	16,238	14,853	31,091	21·8	19·9	41·6	109·3	8·2	...	22·8	20·8	43·6	17
18	Shahpur ...	376,886	310,480	687,366	14,306	12,452	26,758	20·8	18·1	38·9	114·9	...	3·3	21·8	19·3	41·1	18
19	Jhelum ...	262,228	211,967	504,195	9,372	8,217	17,589	18·6	16·3	34·9	114·1	3·8	...	20·1	17·8	37·8	19
20	Rawalpindi ...	267,724	239,918	507,642	9,915	9,204	19,019	19·3	18·1	37·5	106·6	5·3	...	20·7	18·9	39·6	20
21	Attock ...	270,392	244,894	515,286	9,998	9,022	19,020	19·4	17·5	36·9	110·8	5·5	...	21·1	18·7	39·8	21
22	Mianwali ...	179,897	161,480	341,377	6,853	5,951	12,804	20·0	17·4	37·4	115·2	...	4·8	22·7	20·1	42·8	22
	MULTAN DIVISION.																
23	Montgomery ...	276,119	227,996	504,115	13,205	11,767	24,972	26·2	23·3	49·5	112·2	1·6	...	23·5	21·1	44·5	23
24	Lyallpur ...	503,644	385,251	888,895	23,220	20,785	44,005	26·1	23·4	49·5	111·7	17·3	...	25·5	23·6	49·1	24
25	Jhang ...	277,123	238,398	515,526	12,100	10,706	22,806	23·5	20·8	44·2	113·0	2·6	...	24·4	21·8	46·2	25
26	Multan ...	435,410	365,965	801,375	18,141	15,595	33,736	22·6	19·5	42·1	116·3	...	7·5	22·5	19·9	42·4	26
27	Muzaffargarh ...	308,350	261,111	569,461	10,300	8,827	19,127	18·1	15·5	33·6	116·7	...	13·7	20·9	17·9	38·8	27
28	Dera Ghazi Khan	272,409	227,451	499,860	7,742	6,332	14,074	15·4	12·7	28·1	122·3	...	17·6	16·7	13·8	30·5	28
	Total ...	10,608,101	8,729,045	19,337,146	459,273	417,460	876,733	23·8	21·6	45·3	110·0	7·4	...	23·7	21·6	45·2	

*Excluding population of Military Cantonments.

STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH

1	2	3	4	5			6		7		
Number.	DISTRICTS.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1911).			BIRTHS.		NUMBER OF DEATHS REGISTERED.		
				Males.	Females.	Total.	Total number.	Birth rate per 1,000 of population.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar	5,213	154	438,458	366,431	804,889	39,828	49.5	14,218	13,875	28,093
2	Rohtak	2,246	318	385,401	329,433	714,834	39,613	55.4	11,701	10,617	22,318
3	Gurgaon	2,264	322	389,215	339,952	729,167	39,724	54.5	18,970	18,979	37,949
4	Karnal	3,153	254	437,698	362,089	799,787	41,712	52.2	13,580	12,106	25,686
5	Ambala	1,851	342	357,470	275,083	632,553	28,307	44.8	12,103	11,091	23,194
6	Simla	101	346	22,015	12,955	34,970	775	22.2	514	407	921
	JULLUNDUR DIVISION.										
7	Kangra	9,978	77	398,401	308,285	766,686	28,203	36.8	12,160	11,454	23,614
8	Hoshiarpur	2,247	409	501,510	417,059	918,569	40,213	43.8	13,892	12,652	26,534
9	Jullundur	1,431	551	440,599	347,357	787,956	37,125	47.1	11,456	11,194	22,650
10	Ludhiana	1,452	356	293,531	223,661	517,192	27,418	53.0	8,198	7,924	16,122
11	Ferozepore	4,286	218	520,868	412,631	933,499	47,590	51.0	15,558	14,069	29,627
	LAHORE DIVISION.										
12	Lahore	2,824	360	581,498	486,244	1,017,742	50,830	49.9	21,062	19,139	40,201
13	Amritsar	1,601	549	495,533	388,778	879,311	45,849	52.1	19,529	18,801	38,330
14	Gurdaspur	1,889	441	466,115	366,446	832,561	40,924	49.2	16,515	15,281	31,796
15	Sialkot	1,991	484	530,755	432,524	963,279	45,603	47.3	20,953	19,576	40,529
16	Gujranwala	4,082	226	518,251	405,168	923,419	38,018	41.2	24,211	21,107	45,318
	RAWALPINDI DIVISION.										
17	Gujrat	2,051	364	400,596	345,038	745,634	31,091	41.6	13,008	11,920	24,928
18	Shahpur	5,097	135	376,886	310,480	687,366	26,758	38.9	14,803	14,183	28,986
19	Jhelum	2,813	179	262,228	241,967	504,195	17,589	34.9	8,140	7,522	15,662
20	Rawalpindi	2,010	253	267,724	239,918	507,642	19,019	37.5	8,727	7,637	16,364
21	Attock	4,025	128	270,392	244,894	515,286	19,020	36.9	8,379	7,787	16,166
22	Mianwali	5,395	63	179,897	161,480	341,377	12,804	37.4	7,215	7,203	14,418
	MULTAN DIVISION.										
23	Montgomery	4,465	113	276,119	227,996	504,115	24,972	49.5	12,232	11,925	24,157
24	Lyallpur	3,340	266	503,644	385,251	888,895	44,005	49.5	14,536	14,047	28,583
25	Jhang	3,363	153	277,128	238,398	515,526	22,806	44.2	10,798	10,627	21,425
26	Multan	6,107	131	435,410	365,965	801,375	33,736	42.1	20,896	19,346	39,742
27	Muzaffargarh	6,052	94	308,350	261,111	569,461	19,127	33.6	13,994	12,941	26,935
28	Dera Ghazi Khan	5,325	94	272,409	227,451	499,860	14,074	28.1	11,947	10,914	22,861
	Total	96,654	200	10,608,101	8,729,045	19,337,146	876,733	45.3	378,785	354,324	733,109

NOTE.—Those born dead are not included

No. II.

DISTRICT OF THE PUNJAB DURING THE YEAR 1917.

8	9											10			11
Number of deaths of males to every 100 deaths of females.	DEATHS PER 1,000 OF POPULATION FROM											MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.			Number.
	Cholera.	Snall-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory dis- cases.	Injuries.	All other causes.	All causes			Males.	Females.	Total.	
									Males.	Females.	Total.				
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
102.5	0.03	0.001	0.02	25.4	0.7	1.6	0.4	6.8	32.1	37.9	34.9	28.9	31.3	30.0	1
110.2	...	0.04	0.02	18.6	0.8	1.7	0.5	9.7	30.4	32.2	31.2	29.4	30.8	30.1	2
100.0	...	0.3	0.01	31.5	1.6	2.2	0.5	15.9	48.7	55.8	52.0	31.6	33.1	32.3	3
112.2	0.02	0.2	0.2	18.7	0.6	2.1	0.4	10.0	31.0	33.4	32.1	34.8	38.6	36.5	4
109.1	0.3	0.1	2.1	20.4	1.0	5.3	0.2	7.3	33.9	40.3	36.7	30.9	38.5	34.2	5
126.3	...	0.03	...	11.5	1.3	6.2	0.4	7.0	23.4	31.4	26.3	19.4	25.0	21.5	6
106.2	0.02	0.001	0.03	17.7	1.2	3.3	0.3	8.2	30.5	31.1	30.8	28.6	30.8	29.7	7
109.7	0.1	...	0.1	19.9	0.03	3.1	0.3	5.4	27.7	30.3	28.9	29.9	33.8	31.7	8
102.3	0.02	0.1	1.1	18.0	0.5	2.9	0.3	5.8	26.0	32.2	28.7	29.6	36.8	32.8	9
103.5	0.01	0.1	1.3	14.5	0.4	2.7	0.4	11.8	27.9	35.4	31.2	29.8	37.1	33.0	10
110.6	0.002	0.1	0.001	18.6	0.7	2.1	0.3	10.0	29.9	34.1	31.7	28.5	33.1	30.5	11
110.0	0.1	0.2	2.0	25.0	0.7	2.2	0.4	8.9	36.2	43.9	39.5	29.9	35.0	32.1	12
103.9	0.1	0.1	0.1	27.8	1.5	6.4	0.4	7.1	39.4	49.0	43.6	34.3	40.7	37.1	13
108.1	0.2	0.03	0.8	20.6	1.8	13.7	0.3	0.9	35.4	41.7	38.2	32.2	37.4	34.5	14
107.0	0.3	0.01	0.04	28.2	1.5	5.1	0.3	6.6	39.5	45.3	42.1	31.8	37.2	34.2	15
114.7	0.02	0.01	0.6	41.4	0.3	0.9	0.5	5.4	46.7	52.1	49.1	34.0	38.5	36.0	16
109.1	0.1	0.01	0.1	24.7	0.6	2.8	0.4	4.9	32.5	34.6	33.4	32.5	36.7	34.4	17
104.4	0.02	...	0.02	32.7	0.5	1.4	0.4	7.2	39.3	45.7	42.2	25.8	28.6	27.0	18
108.2	0.01	...	0.9	22.4	0.5	2.0	0.4	5.0	31.0	31.1	31.1	30.8	33.0	31.9	19
114.3	0.01	0.01	3.2	18.4	3.5	3.1	0.5	3.5	32.6	31.8	32.2	36.4	39.5	37.9	20
107.6	...	0.02	0.1	24.0	0.1	1.9	0.4	4.9	31.0	31.8	31.4	30.3	31.9	31.0	21
100.2	...	0.04	...	36.8	0.7	0.6	0.2	3.9	40.1	44.6	42.2	29.0	29.8	29.4	22
102.6	...	0.2	0.1	40.6	0.2	0.3	0.5	6.2	44.3	52.3	47.9	21.8	24.1	22.8	23
103.5	0.04	0.2	0.03	23.4	0.6	1.3	0.4	6.2	28.9	36.5	32.2	21.2	26.7	23.6	24
101.6	0.02	0.001	...	31.7	0.7	0.4	0.2	8.6	39.0	44.6	41.6	25.8	27.2	26.5	25
105.4	0.2	0.1	0.004	41.5	0.5	0.6	0.2	6.5	46.8	52.9	49.6	24.1	26.5	25.2	26
108.1	0.01	0.1	...	43.5	0.2	0.3	0.4	2.9	45.4	49.6	47.3	26.7	28.0	27.3	27
109.5	...	0.03	...	40.9	0.8	0.8	0.3	3.0	43.9	48.0	45.7	21.9	22.4	22.1	28
106.9	0.1	0.1	0.5	26.4	0.8	2.8	0.4	6.9	35.7	40.6	37.9	29.5	33.2	31.2	

in this or any other statement.

ANNUAL FORM No. III.

DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

1	2	3												4	5
Number.	DISTRICTS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	Number.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	AMBALA DIVISION.														
1	Hissar ...	1,455	1,240	1,607	1,730	1,699	2,095	2,080	1,680	2,023	4,220	5,117	3,147	28,093	1
2	Rohtak ...	1,332	1,007	1,371	1,704	1,819	1,867	1,694	1,545	1,803	2,729	3,081	2,336	22,318	2
3	Gurgaon ...	1,382	1,036	1,441	1,741	2,167	2,442	2,191	1,971	2,481	5,990	9,029	6,078	37,949	3
4	Karnal ...	2,038	1,503	1,802	2,294	2,424	2,453	2,384	1,969	1,815	2,009	2,763	2,227	25,686	4
5	Ambala ...	1,751	1,593	2,125	2,437	2,571	2,016	1,695	1,521	1,506	1,896	2,083	2,000	23,194	5
6	Simla ...	55	44	71	93	105	78	95	97	68	87	73	55	921	6
	JULLUNDUR DIVISION.														
7	Kangra ...	1,900	1,634	1,916	2,083	1,879	1,911	1,968	2,095	2,392	2,231	1,815	1,740	23,614	7
8	Hoshiarpur ...	1,823	1,530	2,185	2,405	2,236	1,909	1,825	1,886	2,347	3,153	2,926	2,309	26,534	8
9	Jullundur ...	1,497	1,312	1,612	1,756	1,790	1,614	1,597	1,742	2,083	2,554	2,699	2,364	22,650	9
10	Ludhiana ...	1,174	939	1,059	1,250	1,254	1,102	1,151	1,280	1,407	1,741	1,890	1,835	16,122	10
11	Ferozepore ...	1,890	1,617	1,950	1,821	1,926	2,179	1,927	1,830	2,218	3,688	4,818	3,763	29,627	11
	LAHORE DIVISION.														
12	Lahore ...	2,342	1,803	2,218	2,129	2,587	2,469	2,262	2,362	3,216	5,654	7,120	6,039	40,201	12
13	Amritsar ...	2,087	1,616	1,920	1,758	2,088	1,847	1,995	2,488	3,559	6,842	7,206	4,924	38,330	13
14	Gurdaspur ...	1,935	1,518	1,742	1,903	1,936	1,743	1,790	1,973	3,341	5,849	4,704	3,362	31,796	14
15	Sialkot ...	2,482	1,865	1,979	1,860	2,184	1,805	1,939	2,177	4,399	9,047	6,867	3,925	40,529	15
16	Gujranwala ...	3,514	2,311	2,169	1,789	2,182	1,843	1,779	1,834	3,233	9,829	8,565	6,270	45,318	16
	RAWALPINDI DIVISION.														
17	Gujrat ...	1,773	1,343	1,476	1,314	1,234	1,213	1,419	1,301	2,015	4,425	4,424	2,991	24,928	17
18	Shahpur ...	1,483	1,243	1,340	1,208	1,310	1,493	1,274	1,042	2,046	5,404	6,696	4,447	28,986	18
19	Jhelum ...	1,210	1,004	1,141	955	1,088	807	789	779	1,200	2,167	2,497	2,025	15,682	19
20	Rawalpindi ...	1,583	1,342	1,426	1,212	1,106	990	828	887	1,249	1,843	2,169	1,724	16,364	20
21	Attock ...	1,407	1,159	1,301	1,079	884	804	807	827	1,094	2,198	2,575	2,031	16,166	21
22	Mianwali ...	1,208	933	982	836	883	808	616	504	1,052	2,121	2,620	1,845	14,418	22
	MULTAN DIVISION.														
23	Montgomery ...	1,087	878	849	795	956	850	726	735	1,420	4,441	6,511	4,909	24,157	23
24	Lyallpur ...	1,500	1,296	1,607	1,648	1,937	1,828	1,447	1,464	2,344	4,626	5,264	3,622	28,583	24
25	Jhang ...	1,234	1,083	1,149	987	1,088	1,024	754	831	1,347	2,835	5,206	3,882	21,425	25
26	Multan ...	2,506	1,639	1,707	1,503	1,747	1,386	1,149	1,165	2,586	7,264	9,880	7,210	39,742	26
27	Muzaffargarh ...	2,114	1,379	1,341	1,266	1,344	1,067	891	687	1,537	4,913	6,157	4,239	26,935	27
28	Dera Ghazi Khan	1,672	1,094	1,170	1,178	957	953	749	706	1,148	3,567	5,760	3,907	22,861	28
	Total for the Province.	47,439	37,016	42,732	42,734	45,411	42,601	39,821	39,378	56,929	113,323	130,515	95,206	733,109	
	Ratio of deaths per 1,000 in each month.	2.45	1.91	2.21	2.21	2.35	2.20	2.06	2.04	2.94	5.86	6.75	4.92	37.91	

ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM
DIFFERENT DISEASES IN THE DISTRICTS OF THE PUNJAB DURING
THE YEAR 1917.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
Number.	Division.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
1	AMBALA.	HISSAR.	Cholera ...	...	...	...	...	...	...	2	...
			Small-pox ...	...	...	...	...	1	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	2,755	2,490	2,725	2,946	776	848	222	23
			Dysentery and Diarrhoea ...	2	2	1	3	7	8	16	1
			Respiratory diseases ...	2	3	5	4	9	11	12	1
			Injuries ...	2	2	4	6	9	9	12	1
			All other causes ...	1,211	1,027	1,091	971	210	198	161	15
			Total ...	3,972	3,524	3,826	3,930	1,012	1,074	425	43
			Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	4	4	6	9	...	1	2	...
			Plague ...	...	...	...	...	...	2	1	...
2	AMBALA.	ROHTAK.	Fevers ...	1,552	1,352	1,759	1,834	475	459	256	18
			Dysentery and Diarrhoea ...	32	36	71	73	28	24	5	1
			Respiratory diseases ...	36	32	39	32	22	13	10	1
			Injuries ...	2	2	13	13	28	12	20	1
			All other causes ...	2,449	2,061	992	787	66	53	26	1
			Total ...	4,075	3,487	2,880	2,748	619	564	320	23
			Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	17	19	55	60	22	29	10	1
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	2,787	3,026	3,021	2,797	973	1,072	357	28
			Dysentery and Diarrhoea ...	73	39	42	42	48	21	28	2
			Respiratory diseases ...	210	65	89	156	54	30	18	2
3	AMBALA.	GURGAON.	Injuries ...	...	4	1	4	3	9	18	2
			All other causes ...	1,865	1,544	2,319	2,846	499	309	63	5
			Total ...	4,952	4,697	5,527	5,905	1,599	1,470	494	42
			Cholera ...	...	...	3	...	1	1	2	...
			Small-pox ...	16	23	35	32	13	11	1	...
			Plague ...	4	10	2	11	1	4	1	...
			Fevers ...	3,588	2,876	1,943	1,692	371	382	73	16
			Dysentery and Diarrhoea ...	90	45	40	39	30	13	14	...
			Respiratory diseases ...	128	145	227	129	110	57	88	4
			Injuries ...	2	9	17	13	10	6	10	1
			All other causes ...	745	987	956	994	157	120	150	9
			Total ...	4,571	4,095	3,223	2,910	693	594	339	33
4	AMBALA.	KARNAL.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	...	...	...	...	...	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	31	60	42	34	15	17	85	9
			Dysentery and Diarrhoea ...	2,200	1,870	1,187	1,230	348	375	160	22
			Respiratory diseases ...	73	62	58	28	42	44	60	3
			Injuries ...	262	250	239	256	160	171	114	9
			All other causes ...	2	3	3	...	...	1	3	...
			Total ...	699	767	602	517	222	108	61	5
			Cholera ...	11	4	4	7	3	6	5	1
			Small-pox ...	8	4	13	14	1	1	1	...
			Plague ...	...	...	...	...	...	...	...	...
5	AMBALA.	AMBALA.	Fevers ...	...	...	...	...	...	...	...	...
			Dysentery and Diarrhoea ...	...	...	...	...	...	...	...	...
			Respiratory diseases ...	...	...	...	...	...	...	...	...
			Injuries ...	...	...	...	...	...	...	...	...
			All other causes ...	...	...	...	...	...	...	...	...
			Total ...	...	...	...	...	...	...	...	...
			Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	...	...	...	...	...	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	62	51	12	13	4	9	4	7
			Dysentery and Diarrhoea ...	11	12	9	3	1	...	...	...
			Respiratory diseases ...	32	11	...	2	3	7	1	...
6	AMBALA.	SIMLA.	Injuries ...	...	...	...	...	6	1	5	...
			All other causes ...	52	32	3	7	5	11	13	...
			Total ...	157	107	24	25	19	28	23	18

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
3	2	8	5	2	1	1	1	...	...	...	...	16	10	1
...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
2	2	3	4	1	2	1	...	...	...	...	...	7	9	...
117	114	529	699	265	500	399	420	575	394	1,758	1,645	10,121	10,295	...
21	17	36	25	48	22	52	39	61	52	75	71	319	251	...
27	24	48	41	111	91	135	124	153	139	174	159	676	608	...
14	12	15	14	21	18	28	19	30	28	33	30	168	151	...
96	70	65	60	45	46	31	26	...	...	...	...	2,910	2,551	...
280	241	704	848	493	680	647	629	819	613	2,040	1,905	14,218	13,875	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	1	...	...	...	...	...	...	...	...	12	16	...
...	1	3	...	...	2	...	...	...	...	...	1	4	7	...
174	165	352	446	289	376	393	351	459	343	1,171	933	6,880	6,443	...
7	5	14	15	9	22	21	12	29	18	57	52	273	267	...
13	20	35	41	43	40	55	53	135	96	242	213	630	550	...
16	18	20	43	17	33	20	12	13	8	12	9	161	162	...
24	27	44	62	22	50	33	30	37	37	48	53	3,741	3,172	...
234	236	468	608	380	523	522	458	673	502	1,530	1,261	11,701	10,617	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	104	121	...
2	1	1	1	3	1	...	1	...	...	...	...	6	4	...
292	226	599	836	436	693	646	667	677	712	1,474	1,395	11,262	11,708	...
34	33	58	53	41	33	66	43	39	65	186	168	615	530	...
29	35	38	52	44	57	64	61	77	72	201	218	824	767	...
16	36	33	42	19	28	23	34	18	26	26	30	157	235	...
59	42	217	155	219	166	200	116	226	78	335	302	6,002	5,614	...
432	373	946	1,144	762	978	999	922	1,037	953	2,222	2,113	18,970	18,979	...
4	1	1	1	...	1	1	1	...	...	...	...	12	5	4
1	3	1	...	3	1	...	...	...	...	...	...	70	71	...
4	4	6	6	20	8	30	18	4	...	...	...	72	67	...
70	98	148	278	140	176	269	574	440	530	815	361	7,857	7,131	...
9	10	12	9	8	14	25	10	10	15	15	35	253	196	...
80	72	40	67	68	64	45	25	29	82	61	89	874	773	...
20	11	10	9	30	42	25	18	25	10	10	10	159	141	...
149	92	401	310	350	399	448	50	385	50	542	622	4,283	3,722	...
337	291	619	680	619	705	843	696	893	687	1,443	1,117	13,580	12,106	...
28	11	27	7	12	9	4	3	2	11	2	2	98	76	5
...	...	...	...	...	...	...	...	...	...	...	...	23	20	...
117	77	134	134	98	110	92	79	58	17	5	23	677	644	...
138	159	306	269	377	363	543	413	515	455	893	846	6,667	6,207	...
27	25	27	32	23	12	25	6	9	8	21	14	365	263	...
66	76	167	171	152	155	133	147	149	121	340	135	1,787	1,579	...
9	16	29	15	29	6	16	4	5	1	1	3	97	51	...
37	53	63	86	77	96	117	94	210	124	301	353	2,389	2,251	...
422	417	753	714	768	751	935	751	948	737	1,563	1,376	12,103	11,091	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
...
...
9	17	19	21	18	25	18	11	15	8	48	32	209	194	...
1	...	2	1	...	1	...	...	...	1	...	1	24	20	...
10	9	19	9	18	3	27	6	12	6	11	28	133	84	...
...	...	...	...	...	...	...	...	...	...	...	...	11	2	...
13	4	16	4	17	8	9	10	8	10	1	14	137	106	...
33	30	56	35	53	37	54	27	35	25	60	75	514	407	...

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
Number.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
7	JULLUNDUR.	KANGRA.	Cholera	2	...
			Small-pox	1
			Plague	1	2	1	1	2	2
			Fevers ..	2,355	2,136	878	769	218	196	88	83
			Dysentery and Diarrhoea ..	71	49	71	38	25	22	15	14
			Respiratory diseases ..	193	54	30	136	38	23	42	84
			Injuries ..	2	8	35	8	9	9	25	12
			All other causes ..	878	705	325	387	165	149	121	87
			Total ..	3,499	2,952	1,340	1,340	456	400	295	283
		8	HOSHIARPUR.	Cholera ...	1	1	3	5	3	2	...	2
Small-pox ..	...			...	...	...	...	...	...	...
Plague ..	...			...	2	3	1	3	4	4
Fevers ..	1,878			1,841	2,051	2,242	442	464	202	196	
Dysentery and Diarrhoea ..	11			7	1	...	...	...	...	...
Respiratory diseases ..	718			503	207	196	44	23	26	23	
Injuries ..	2			3	30	15	18	15	9	11	
All other causes ..	1,907			1,712	255	235	47	53	29	22	
Total ..	4,517			4,067	2,549	2,696	555	560	270	258	
9	JULLUNDUR.	Cholera ...	...	...	1	2	...	1	...	...
		Small-pox ..	5	3	10	15	...	2	4	...	
		Plague ..	14	20	29	38	61	63	58	96	
		Fevers ...	1,398	1,653	1,784	1,921	337	338	146	181	
		Dysentery and Diarrhoea ..	57	51	51	47	5	3	4	1	
		Respiratory diseases ..	688	592	149	122	18	12	5	16	
		Injuries ..	1	5	21	25	28	16	10	8	
		All other causes ..	2,055	2,136	64	71	8	4	4	2	
		Total ..	4,218	4,460	2,109	2,241	457	439	231	304	
10	LUDHIANA.	Cholera ...	...	...	...	...	...	...	...	...
		Small-pox ..	7	5	13	8	7	11	2	5	
		Plague ..	...	...	2	9	11	7	31	26
		Fevers ..	578	446	399	283	271	271	297	272	
		Dysentery and Diarrhoea ..	16	7	8	3	9	6	3	7	
		Respiratory diseases ..	162	86	108	78	65	43	62	75	
		Injuries ..	8	5	5	14	11	8	6	2	
		All other causes ..	2,465	2,494	109	95	30	44	58	47	
		Total ..	3,236	3,043	644	490	404	390	459	434	
11	FEROZEPUR.	Cholera ...	...	...	...	...	...	...	...	...
		Small-pox ..	14	9	24	26	15	14	5	5	
		Plague ..	...	...	...	...	...	...	...	...
		Fevers ..	2,620	2,289	2,651	2,675	576	590	232	204	
		Dysentery and Diarrhoea ..	2	2	52	46	39	22	21	17	
		Respiratory diseases ..	...	...	143	119	71	60	68	47
		Injuries ..	...	...	63	32	37	20	9	5
		All other causes ..	3,006	2,756	979	791	120	87	69	59	
		Total ..	5,642	5,056	3,912	3,689	858	793	404	337	
12	LAHORE.	LAHORE.	Cholera	2	...	2	4	8	5
			Small-pox ..	15	28	38	45	20	27	3	4
			Plague ..	40	29	125	99	124	112	111	98
			Fevers ..	3,434	3,026	3,721	3,744	899	1,060	478	660
			Dysentery and Diarrhoea ..	116	62	101	65	22	16	21	9
			Respiratory diseases ..	100	64	68	51	39	23	35	22
			Injuries ..	22	18	41	26	29	15	26	8
			All other causes ..	2,751	2,527	842	811	81	40	69	65
			Total ..	6,478	5,754	4,938	4,841	1,216	1,297	751	871

o. IV—CONTINUED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2	1	1	1	4	2	1	1	1	...	...	...	11	5	7
...
102	142	318	669	553	598	527	450	577	387	1,327	1,238	6,943	6,653	...
24	35	27	36	47	54	23	33	60	60	125	109	483	450	...
71	111	223	122	141	167	189	179	75	146	353	127	1,360	1,149	...
8	9	15	10	16	10	14	7	16	8	25	9	165	90	...
88	128	187	266	128	145	206	218	266	195	820	805	3,184	3,085	...
295	428	773	1,106	890	970	961	890	996	797	2,655	2,288	12,160	11,454	...
4	...	9	2	9	...	11	4	10	1	5	2	55	19	8
...
2	1	7	1	5	2	4	3	2	...	8	...	35	17	...
207	216	418	640	431	551	604	474	677	425	2,398	1,937	9,308	8,986	...
...	...	1	2	1	1	2	...	1	...	4	...	21	10	...
32	25	71	96	77	81	92	71	113	53	276	134	1,656	1,206	...
8	9	26	14	19	13	21	13	10	6	20	16	163	115	...
23	20	50	67	46	53	63	35	56	28	168	74	2,644	2,299	...
276	271	582	822	588	702	797	600	869	513	2,879	2,163	13,882	12,652	...
1	1	1	1	...	2	2	3	...	...	...	...	5	10	9
1	1	1	...	1	...	...	...	...	...	...	1	22	22	...
42	35	65	59	44	50	43	32	23	35	44	36	423	464	...
133	152	270	380	273	341	312	289	452	317	1,974	1,546	7,084	7,113	...
2	1	13	6	14	9	14	6	17	10	46	28	223	162	...
12	17	44	46	38	29	44	25	66	44	200	102	1,264	1,005	...
6	5	15	7	13	5	14	6	11	5	26	19	145	101	...
10	6	22	20	19	21	21	12	31	13	56	27	2,290	2,312	...
212	218	431	519	402	457	450	373	600	424	2,346	1,759	11,456	11,194	...
...	...	2	1	...	1	...	...	...	...	...	...	2	2	10
4	1	...	...	1	...	...	...	...	...	...	...	34	30	...
57	64	91	75	26	68	59	48	32	25	21	13	330	335	...
276	285	356	393	546	520	448	556	348	443	233	268	3,752	3,742	...
5	10	12	5	8	4	17	13	21	11	14	10	113	76	...
81	67	36	83	85	68	72	29	43	56	54	34	773	619	...
24	9	16	13	27	6	12	7	8	11	9	6	126	81	...
35	33	56	72	89	62	93	107	93	56	40	24	3,068	3,039	...
482	474	569	647	782	729	701	760	550	602	371	355	8,198	7,924	...
1	...	...	1	...	...	...	...	...	...	...	...	1	1	11
5	4	4	3	1	3	1	2	...	...	...	...	69	66	...
...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
160	156	357	420	313	366	359	345	414	331	1,303	1,003	8,985	8,379	...
23	21	30	32	36	27	35	31	39	32	49	50	331	280	...
45	40	100	111	102	89	125	97	133	97	241	223	1,033	883	...
14	4	24	20	21	8	18	8	12	6	7	4	205	167	...
70	58	122	125	109	108	127	106	127	97	204	166	4,933	4,353	...
323	283	638	712	582	601	665	589	730	563	1,804	1,446	15,558	14,069	...
20	10	31	20	15	10	9	2	2	1	...	...	89	52	12
1	4	...	7	2	4	1	2	...	...	...	...	80	121	...
97	77	133	137	140	132	128	121	97	86	90	80	1,085	971	...
299	447	755	748	447	420	470	360	629	368	1,831	1,604	12,963	12,437	...
12	10	24	22	28	16	29	22	24	16	60	50	437	288	...
48	38	134	95	151	118	211	153	214	163	249	223	1,249	950	...
25	10	36	16	48	18	29	14	22	8	26	12	304	145	...
90	71	90	50	258	239	194	137	117	70	360	165	4,852	4,175	...
592	667	1,206	1,355	1,059	957	1,071	811	1,105	712	2,616	2,134	21,062	19,139	...

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
Number.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
13	LAHORE—CONCLUDED.	AMRITSAR.	Cholera ... ..	...	...	4	2	5	3	1	...
			Small-pox	13	9	39	30	11	4	2	...
			Plague ... ..	...	2	2	4	9	11	3	...
			Fevers	3,714	4,004	3,140	3,484	642	630	165	159
			Dysentery and Diarrhoea	161	69	65	115	42	4	53	37
			Respiratory diseases	790	667	355	375	112	153	50	88
			Injuries	2	3	19	13	35	17	18	10
			All other causes	1,478	1,310	1,324	1,301	90	69	66	41
			Total	6,159	6,064	4,948	5,324	946	936	358	350
14	LAHORE—CONCLUDED.	GURDASPUR.	Cholera	2	1	13	6	12	9	9	6
			Small-pox	1	1	7	5	1	4	1	...
			Plague	7	6	15	15	31	40	39	45
			Fevers	1,443	1,413	2,286	2,687	674	701	354	331
			Dysentery and Diarrhoea	81	83	212	198	37	37	24	18
			Respiratory diseases	3,434	2,854	851	803	162	135	83	81
			Injuries	2	1	25	32	24	13	11	11
			All other causes	56	29	56	30	20	17	15	8
			Total	5,026	4,388	3,465	3,776	961	956	536	500
15	LAHORE—CONCLUDED.	SIALKOT.	Cholera	1	3	19	22	20	20	12	8
			Small-pox	1	1	2	6	1	...	...	...
			Plague ... ..	...	...	...	2	3	2	3	1
			Fevers	3,830	3,539	3,436	3,807	896	992	583	709
			Dysentery and Diarrhoea	255	211	153	141	62	62	32	31
			Respiratory diseases	900	713	698	437	185	148	108	102
			Injuries	1	3	38	33	36	22	24	10
			All other causes	1,008	994	764	623	233	211	138	113
			Total	5,996	5,464	5,010	5,071	1,436	1,457	900	974
16	LAHORE—CONCLUDED.	GUJRANWALA.	Cholera ... ..	...	...	...	...	1	...	3	...
			Small-pox	1	...	3	1	3	...	...	...
			Plague ... ..	...	...	5	3	17	13	21	20
			Fevers	5,718	4,890	5,446	5,219	1,226	1,261	409	514
			Dysentery and Diarrhoea	5	4	7	5	11	9	18	11
			Respiratory diseases	141	79	90	87	13	10	27	2
			Injuries	45	21	29	18	37	23	22	9
			All other causes	911	979	906	781	234	127	157	81
			Total	6,821	5,973	6,486	6,114	1,542	1,443	657	637
17	RAWALPINDI.	GUJRAT.	Cholera	1	1	1	3	4	5	1	2
			Small-pox	2	...	2	...	...	...	...	...
			Plague	1	...	...	...	...	2	3	1
			Fevers	2,177	2,062	1,676	1,663	627	606	383	407
			Dysentery and Diarrhoea	46	38	33	43	22	22	13	10
			Respiratory diseases	465	415	224	206	84	59	11	6
			Injuries	11	10	28	16	16	12	17	13
			All other causes	816	726	336	289	144	127	97	69
			Total	3,519	3,252	2,300	2,220	897	833	525	508
18	RAWALPINDI.	SHAHPUR.	Cholera ... ..	...	...	...	...	2	2	1	...
			Small-pox ... ..	...	...	...	...	...	...	...	...
			Plague ... ..	...	...	...	...	1	...	1	...
			Fevers	1,853	1,697	3,782	3,943	935	956	433	441
			Dysentery and Diarrhoea ... ..	...	...	9	3	17	10	20	14
			Respiratory diseases	25	19	44	33	51	29	53	36
			Injuries ... ..	...	...	55	52	39	32	20	12
			All other causes	2,361	2,13	41	35	26	21	25	22
			Total	4,239	3,829	3,931	4,066	1,071	1,050	553	525

No. IV—CONTINUED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
6	1	23	9	12	5	13	8	7	2	16	2	87	34	13
1	1	1	2	...	1	...	...	...	...	...	...	67	50	
4	6	11	4	7	8	2	6	4	1	...	1	42	52	
133	227	485	698	433	457	564	329	640	348	2,490	1,785	12,346	12,121	
33	29	64	59	68	62	51	36	83	59	97	89	718	604	
125	91	203	227	280	282	260	234	240	265	405	469	2,770	2,852	
15	12	43	22	14	8	20	9	23	10	26	14	225	118	
49	31	39	32	70	57	27	17	25	16	106	96	3,274	2,970	
366	398	869	1,053	834	880	877	639	1,022	701	3,150	2,456	19,529	13,801	
9	5	15	17	14	8	6	14	9	1	3	4	92	71	14
1	...	...	...	...	...	...	...	...	...	1	...	12	10	
23	29	56	62	76	54	42	54	35	35	14	20	338	360	
195	246	431	587	460	502	578	433	614	376	1,581	1,216	8,616	8,492	
28	23	60	47	66	75	81	40	77	48	125	94	801	663	
77	86	181	196	187	179	200	148	201	168	717	636	6,093	5,286	
6	4	18	8	15	9	10	5	12	1	24	10	147	94	
26	25	48	39	37	53	37	33	44	28	77	43	416	305	
365	418	809	956	855	880	954	727	992	657	2,552	2,023	16,515	15,281	
10	8	26	24	11	21	14	15	9	8	18	13	140	142	15
...	...	...	...	...	...	...	...	...	...	...	...	4	7	
1	1	5	1	3	6	4	4	3	...	2	1	24	18	
531	552	680	737	592	601	647	577	631	466	1,926	1,461	13,752	13,441	
30	25	33	28	31	31	35	20	44	36	105	87	780	672	
83	82	103	83	90	85	89	77	119	106	452	344	2,727	2,177	
20	5	24	9	20	8	18	8	12	5	18	18	211	121	
93	104	116	115	119	117	134	113	150	142	560	466	3,315	2,998	
768	777	987	997	866	869	941	814	968	763	3,081	2,390	20,953	19,576	
2	...	4	1	4	...	2	...	1	1	...	...	17	2	16
1	...	1	...	...	...	...	...	...	...	...	...	9	1	
29	32	37	30	40	49	56	31	41	34	40	34	286	246	
218	230	751	909	747	898	1,054	871	1,108	791	3,540	2,409	20,217	17,992	
19	13	16	10	17	18	13	11	22	15	23	25	151	121	
19	15	20	23	38	24	33	21	54	51	75	32	516	344	
17	5	21	2	33	19	35	13	42	12	23	12	304	134	
88	63	103	55	201	91	11	30	63	41	34	19	2,711	2,267	
393	358	962	1,030	1,080	1,099	1,204	977	1,331	945	3,735	2,531	24,211	21,107	
3	2	3	3	9	1	3	5	4	...	1	2	30	24	17
...	...	...	...	...	...	...	...	...	...	...	...	6	...	
1	5	5	2	5	5	6	6	...	4	2	1	23	26	
325	363	460	485	510	647	614	556	761	603	1,915	1,545	9,448	8,937	
15	9	12	13	15	12	25	20	25	13	33	24	239	204	
13	12	24	19	41	26	60	36	77	53	136	69	1,145	904	
16	6	25	20	14	12	20	8	17	10	15	9	179	116	
70	70	88	77	94	64	51	72	83	80	159	135	1,938	1,709	
443	467	627	619	683	767	780	703	967	766	2,262	1,785	13,008	11,920	
2	1	1	2	2	2	2	...	...	...	...	...	10	7	18
...	
1	...	...	...	2	1	1	2	...	1	1	...	7	4	
266	332	330	519	339	532	480	486	660	585	2,117	1,726	11,245	11,217	
28	21	33	27	28	31	20	16	16	9	4	3	175	134	
62	36	74	45	89	56	86	53	53	35	35	21	572	363	
16	9	11	4	8	9	5	3	1	3	...	...	155	124	
25	24	30	18	33	25	31	23	35	26	32	27	2,639	2,334	
400	423	479	615	551	653	625	583	765	659	2,189	1,777	14,803	14,183	

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
Number.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
19	RAWALPINDI—CONCLUDED.	JHELUM.	Cholera ... ..	...	...	...	...	...	1	...	...
			Small-pox ... ..	...	...	...	...	...	...	...	...
			Plague	1	2	11	7	32	34	27	34
			Fevers	764	739	1,282	1,384	415	421	208	194
			Dysentery and Diarrhoea	22	8	38	17	6	5	4	...
			Respiratory diseases	20	16	23	15	11	10	9	...
			Injuries	2	...	15	16	14	18	13	...
			All other causes	1,063	891	115	123	22	18	16	1
			Total	1,872	1,656	1,484	1,562	500	507	277	24
20		RAWALPINDI.	Cholera ... ..	...	...	1	...	1	...	...	...
			Small-pox	1	1	...	...	1	...	...	...
			Plague	1	4	23	28	80	79	115	111
			Fevers	576	471	646	734	296	309	168	20
			Dysentery and Diarrhoea	782	653	102	79	7	9	6	...
			Respiratory diseases	29	31	27	24	23	18	34	26
			Injuries ... ..	...	1	16	17	27	20	23	10
			All other causes	632	618	55	53	10	10	20	11
			Total	2,021	1,779	870	935	444	445	366	371
21		ATTOCK.	Cholera ... ..	...	...	2	3	1	...	...	...
			Small-pox	2	...	2	...	1	...	...	...
			Plague	1	...	...	1	...	...	3	2
			Fevers	959	914	1,342	1,389	513	521	286	253
			Dysentery and Diarrhoea	5	4	4	3	...	...	...	...
			Respiratory diseases	9	11	32	15	12	10	24	18
			Injuries	1	1	17	17	20	12	12	6
			All other causes	1,084	906	157	132	34	26	9	11
			Total	2,061	1,836	1,554	1,560	580	569	334	290
22		MIANWALI.	Cholera ... ..	...	...	...	...	...	...	...	...
			Small-pox	2	2	1	4	...	...	...	...
			Plague ... ..	...	...	...	...	...	...	...	...
			Fevers	1,459	1,212	1,304	1,490	557	573	232	255
			Dysentery and Diarrhoea	29	36	13	9	6	2	1	2
			Respiratory diseases	18	14	8	15	4	1	2	...
			Injuries ... ..	...	...	9	11	10	6	5	1
			All other causes	497	457	19	18	14	12	4	3
			Total	2,005	1,721	1,354	1,547	591	594	244	261
23	MULTAN.	MOHOMBERY.	Cholera ... ..	...	...	...	...	...	...	...	...
			Small-pox	9	10	15	13	13	10	...	...
			Plague ... ..	...	...	...	...	5	...	4	...
			Fevers	3,548	3,336	2,492	2,604	679	779	397	407
			Dysentery and Diarrhoea	8	6	14	7	3	3	1	1
			Respiratory diseases	8	10	11	12	2	3	2	3
			Injuries ... ..	...	...	13	9	8	13	9	11
			All other causes	243	231	451	352	95	84	59	60
			Total	3,816	3,593	2,996	2,997	805	892	472	482
24		LYALLPUR.	Cholera ... ..	...	...	3	1	2	4	1	2
			Small-pox	25	19	46	39	12	14	1	6
			Plague	1	2	1	2	1	...	1	2
			Fevers	2,390	2,483	3,706	3,943	806	982	357	412
			Dysentery and Diarrhoea	48	35	88	84	29	14	8	3
			Respiratory diseases	159	115	84	100	23	28	10	10
			Injuries	3	1	60	52	42	25	23	5
			All other causes	2,630	2,312	119	109	30	25	20	15
			Total	5,256	4,967	4,107	4,330	945	1,092	421	455

D. IV—CONTINUED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Number.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	...	1	...	...	...	...	...	...	...	...	1	2	4	19
...
10	13	26	51	22	35	26	30	18	24	22	12	195	238	
152	117	293	404	377	413	361	362	501	360	1,387	1,142	5,740	5,538	
2	1	10	6	11	14	17	11	14	6	33	18	157	86	
22	19	64	74	91	58	73	54	65	39	202	116	580	410	
6	5	10	8	22	11	16	1	13	5	11	7	122	77	
7	21	20	31	29	29	22	17	21	11	29	16	1,344	1,169	
200	176	424	574	552	560	515	475	632	445	1,684	1,318	8,140	7,522	
...	...	...	...	...	...	1	...	...	...	1	...	4	...	20
...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
73	72	140	147	137	127	91	95	76	62	71	78	807	807	
160	138	360	430	535	480	518	389	447	383	1,200	899	4,906	4,434	
11	4	16	4	13	12	13	7	11	7	85	15	996	794	
46	29	153	108	178	104	155	85	119	63	205	96	968	584	
12	5	16	11	19	13	9	15	9	7	26	11	157	110	
13	23	31	56	34	53	26	35	27	21	39	23	887	907	
315	271	716	756	916	789	813	626	689	543	1,577	1,122	8,727	7,637	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	21
...	...	...	...	...	...	...	...	...	...	...	...	5	...	...
1	...	7	1	4	3	5	1	1	...	1	3	23	11	
201	182	356	391	497	505	471	423	519	442	1,163	1,051	6,307	6,071	
...	1	1	...	2	...	...	2	...	...	2	1	14	11	
22	31	62	69	85	81	72	54	74	63	129	121	521	473	
5	3	24	4	24	4	12	4	5	2	14	9	134	62	
3	8	10	32	24	17	12	8	8	7	34	9	1,375	1,156	
232	225	460	497	636	610	572	492	607	514	1,343	1,194	8,379	7,787	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
1	1	1	1	...	...	...	...	...	...	...	...	5	...	...
...
187	189	299	452	342	439	438	402	494	471	921	849	6,233	6,332	
1	...	5	8	5	2	8	11	11	5	33	38	112	113	
3	1	12	18	8	16	7	5	11	4	27	20	100	94	
5	1	6	1	10	2	4	2	1	1	3	1	53	26	
2	2	15	30	13	24	18	14	10	5	120	65	712	630	
199	194	338	510	373	483	475	434	527	486	1,104	973	7,215	7,203	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
3	4	...	1	...	...	...	...	...	...	...	...	40	...	...
3	1	10	2	7	2	10	1	6	1	1	2	46	9	
351	334	334	405	346	371	409	433	516	491	1,151	1,100	10,223	10,260	
1	1	2	1	2	3	2	3	5	3	7	6	45	34	
5	7	4	2	6	4	10	1	14	2	17	3	79	47	
16	15	24	20	20	12	20	15	21	2	5	3	136	100	
49	97	82	99	96	147	100	143	103	96	385	128	1,663	1,437	
428	459	456	530	477	539	551	596	665	595	1,566	1,242	12,232	11,925	
...	...	2	2	4	2	...	...	1	1	3	3	16	15	24
...	1	1	3	2	1	1	...	1	...	...	...	89	88	
1	1	3	5	3	1	1	1	...	...	...	...	12	14	
207	210	327	393	254	343	342	281	398	294	1,551	1,147	10,338	10,488	
6	5	7	9	7	16	16	10	24	14	60	34	293	224	
7	11	36	35	32	40	52	28	62	35	176	84	641	486	
6	8	25	12	29	5	19	6	15	5	13	7	235	126	
10	12	14	40	18	47	12	29	11	10	48	12	2,912	2,611	
237	248	415	499	349	455	443	355	512	359	1,851	1,287	14,536	14,047	

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFEREN

1	2	3	4	5	6	7	8					
Number.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.		
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
1	2	3	4	5	6	7	8	9	10	11	12	
25		JHANG.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox...	1	...
			Plague
			Fevers ...	2,289	2,193	2,360	2,758	627	707	198	200	
			Dysentery and Diarrhoea	51	38	30	26	11	9	6	...	
			Respiratory diseases ...	10	13	4	7	5	3	6	...	
			Injuries ...	3	2	10	5	3	4	3	...	
			All other causes ...	1,423	1,263	259	203	61	58	47	50	
			Total ...	3,776	3,509	2,663	2,999	707	781	261	260	
			26		MULTAN.	Cholera	14	15	14	11	13	...
Small-pox...	7	4				5	5	5	2	1	...	
Plague ...	...	...				...	...	...	...	...	...
Fevers ...	5,065	4,754				4,089	4,166	673	690	454	491	
Dysentery and Diarrhoea	86	60				21	21	7	12	6	10	
Respiratory diseases...	22	16				12	21	8	13	12	22	
Injuries ...	2	1				24	16	7	8	12	...	
All other causes ...	882	761				592	524	140	134	106	111	
Total ...	6,064	5,596				4,757	4,768	854	870	604	647	
27		MUZAFFARGARH.				Cholera
			Small-pox...	4	4	3	2	4	4	1	...	
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	3,121	2,967	3,064	3,123	858	683	285	232	
			Dysentery and Diarrhoea	12	6	9	5	4	1	...	1	
			Respiratory diseases	18	18	6	6	1	3	3	1	
			Injuries ...	2	3	22	27	20	7	20	5	
			All other causes ...	623	554	38	24	18	9	10	8	
			Total ...	3,780	3,552	3,142	3,187	905	707	320	250	
			28		DEBA GHAZI KHAN.	Cholera
Small-pox...	...	1				4	2	1	3	3	...	
Plague ...	...	...				...	...	...	...	...	...
Fevers ...	2,318	2,086				2,933	2,882	952	787	315	289	
Dysentery and Diarrhoea	28	33				24	33	15	15	1	1	
Respiratory diseases ...	26	27				12	7	5	5	7	7	
Injuries ...	9	7				5	5	8	6	5	...	
All other causes ...	208	187				105	84	59	38	29	37	
Total ...	2,589	2,341				3,083	3,013	1,040	854	360	284	
Total for the Province—												
			Cholera ...	16	10	63	63	70	69	61	48	
			Small-pox ...	154	148	323	319	132	137	38	45	
			Plague ...	101	135	260	258	393	390	513	552	
			Fevers ...	66,431	61,816	65,115	67,422	17,066	17,662	7,742	8,142	
			Dysentery and Diarrhoea...	2,174	1,658	1,327	1,176	535	488	380	286	
			Respiratory diseases ...	8,603	6,823	3,685	3,444	1,333	1,101	922	871	
			Injuries ...	126	113	618	495	534	359	390	228	
			All other causes ...	35,998	33,079	13,874	13,193	2,840	2,162	1,642	1,316	
			Total ...	113,613	103,782	85,270	86,370	22,903	22,318	11,688	11,488	
Population according to Census of 1911 ...				424,654	404,431	997,515	931,872	1,482,324	1,259,701	1,321,272	931,615	
Ratio per 1,000 living for the Province—												
			Cholera ...	0.04	0.02	0.07	0.07	0.05	0.05	0.05	0.05	
			Small-pox ...	0.36	0.37	0.32	0.34	0.09	0.11	0.03	0.05	
			Plague ...	0.24	0.33	0.26	0.28	0.27	0.31	0.39	0.59	
			Fevers ...	156.44	152.85	65.28	72.35	11.51	14.02	5.86	8.74	
			Dysentery and Diarrhoea	5.12	4.10	1.33	1.26	0.36	0.35	0.29	0.31	
			Respiratory diseases ...	20.26	16.87	3.69	3.70	0.90	0.87	0.70	0.93	
			Injuries ...	0.30	0.28	0.62	0.53	0.36	0.28	0.29	0.24	
			All other causes ...	84.77	81.79	13.91	14.16	1.92	1.72	1.24	1.41	
			Total ...	267.52	256.61	85.43	92.68	15.45	17.72	8.85	12.33	

NOTE—The population of military cantonments by different ages cannot be

NOTE.—As the correct population of the different age periods according to the Census of 1911 of the Punjab Province as at present constituted is not prior to the separation of the (new) Delhi Province—vide Punjab Government

No. IV—CONCLUDED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1917.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		Number.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	...	1	1	3	...	2	1	...	...	...	...	7	2	25
...	...	...	...	...	...	...	...	...	...	...	...	1	...	
131	127	256	348	231	362	337	286	363	309	1,293	958	8,085	8,248	
3	1	9	6	8	9	13	12	28	24	36	30	195	161	
1	3	7	7	14	8	11	8	12	14	34	14	104	83	
6	1	6	2	4	6	5	2	8	3	6	1	54	32	
34	58	56	97	71	80	71	62	89	55	241	175	2,352	2,101	
176	190	335	461	331	485	439	371	500	405	1,610	1,178	10,798	10,627	
9	14	15	8	13	10	12	5	7	8	5	3	102	81	26
3	1	4	1	2	3	...	...	1	...	1	...	29	18	
1	...	1	...	2	...	...	...	...	...	...	...	4	...	
411	472	679	919	932	972	1,010	874	1,022	839	2,610	2,153	16,945	16,830	
8	7	3	8	11	5	15	7	16	8	26	20	199	158	
17	36	28	46	23	30	23	20	25	20	49	33	219	257	
12	7	22	8	20	2	14	5	12	3	4	5	129	59	
117	113	139	128	150	131	151	140	179	153	313	248	2,769	2,443	
578	650	891	1,118	1,153	1,153	1,225	1,051	1,262	1,031	3,008	2,462	20,396	19,346	
...	...	2	...	1	...	...	...	2	1	...	...	6	1	27
2	...	1	2	1	...	...	...	...	...	...	...	16	15	
218	187	676	839	793	890	890	771	901	610	2,059	1,593	12,865	11,895	
2	1	2	2	5	2	2	7	4	3	10	6	50	34	
3	2	10	15	8	6	15	10	24	9	18	14	106	84	
8	...	14	10	17	8	17	7	11	5	6	7	137	79	
8	24	30	100	29	74	29	21	10	6	19	13	814	833	
241	214	735	968	854	980	953	816	952	634	2,112	1,633	13,994	12,941	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	28
...	...	...	...	...	...	...	...	...	...	...	...	8	6	
133	106	446	682	596	700	687	541	699	483	1,580	1,253	10,659	9,759	
12	4	16	17	15	9	15	11	34	9	43	43	203	175	
9	9	15	20	21	16	21	15	40	22	54	37	210	165	
7	7	13	5	14	7	12	5	18	7	9	7	100	56	
29	39	48	78	61	78	70	60	66	61	92	91	767	753	
190	165	538	802	707	810	805	632	857	582	1,778	1,431	11,947	10,914	
106	57	173	106	115	75	84	68	55	35	54	32	802	563	
24	21	15	21	13	13	4	4	2	...	3	1	708	709	
471	424	747	724	646	670	602	535	401	326	322	305	4,456	4,319	
5,801	6,189	11,593	15,002	12,122	14,031	14,328	12,924	16,052	12,564	43,709	35,101	259,959	250,853	
369	312	545	488	567	516	635	439	724	547	1,334	1,121	8,590	6,981	
1,028	1,004	1,967	1,921	2,171	1,978	2,364	1,819	2,399	2,027	5,138	3,794	29,610	24,782	
333	232	541	349	543	322	456	250	390	198	408	269	4,339	2,815	
1,317	1,323	2,205	2,304	2,458	2,480	2,344	1,758	2,480	1,516	5,163	4,171	70,321	63,302	
9,449	9,562	17,786	20,915	18,635	20,085	20,817	17,797	22,503	17,213	56,131	44,794	378,785	354,324	
94,090	726,853	1,885,914	1,581,886	1,446,929	1,197,335	1,065,657	894,099	711,241	544,726	662,471	510,371	10,608,101	8,729,045	
0.11	0.08	0.09	0.07	0.08	0.06	0.08	0.08	0.08	0.06	0.08	0.06	0.08	0.06	
0.02	0.03	0.01	0.01	0.01	0.01	0.003	0.004	0.003	...	0.003	0.001	0.07	0.08	
0.47	0.58	0.40	0.46	0.45	0.56	0.56	0.60	0.56	0.60	0.49	0.60	0.42	0.49	
5.84	8.51	6.15	9.48	8.38	11.80	13.47	14.45	22.57	23.06	66.05	68.78	24.51	28.74	
0.37	0.43	0.29	0.31	0.40	0.43	0.60	0.49	1.02	1.04	2.01	2.20	0.81	0.80	
1.03	1.38	1.09	1.21	1.50	1.65	2.22	2.03	3.37	3.72	7.76	7.43	2.79	2.84	
0.33	0.32	0.29	0.22	0.37	0.27	0.43	0.28	0.55	0.36	0.62	0.53	0.41	0.32	
1.32	1.82	1.17	1.46	1.70	2.07	2.20	1.97	3.49	2.79	7.79	8.17	6.63	7.25	
9.51	13.16	9.43	13.22	12.88	16.77	19.53	19.90	31.64	31.60	84.73	87.77	35.71	40.59	

cluded, as it is not shown separately in the census returns.

available, the ratios shown in columns 5 to 14 are calculated under the orders of the Local Government on the population of the Punjab as constituted by the Census of India, 1911, and the Punjab Census Report, 1912, No. 2943-S., dated 1st October 1912.

ANNUAL FORM No. V.

DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB
DURING THE YEAR 1917.

1 No.	2 DISTRICTS.	3 POPULATION ACCORDING TO CENSUS OF 1911.					4 NUMBER OF DEATHS REGISTERED.					5 RATIO OF DEATHS PER 1,000 OF POPULATION.					18 Number.
		Muhammadans.	Hindus.	Indian Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Indian Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Indian Christians.	Other classes.	Total.	
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
	AMBALA DIVISION.																
1	Hissar ...	218,600	585,995	79	215	804,889	7,927	20,165	...	1	28,093	36·26	34·41	...	4·65	34·90	1
2	Rohtak ...	113,493	600,168	1,136	37	714,834	3,554	18,761	3	...	22,318	31·31	31·26	2·64	...	31·22	2
3	Gurgaon ...	235,653	492,684	687	143	729,167	15,348	22,593	8	...	37,949	65·13	45·86	11·64	...	52·04	3
4	Karnal ...	224,920	573,947	836	84	799,787	7,427	18,251	5	3	25,686	33·02	31·80	5·98	35·71	32·12	4
5	Ambala ...	188,252	443,202	745	354	632,553	7,203	15,979	12	...	23,194	38·26	36·05	16·11	...	36·67	5
6	Simla ...	4,775	27,093	533	2,569	34,970	176	741	3	1	921	36·86	27·35	5·63	0·88	26·34	6
	JULLUNDUR DIVISION.																
7	Kangra ...	38,770	723,570	221	4,125	766,686	1,148	22,455	11	...	23,614	29·61	31·03	49·77	...	30·80	7
8	Hoshiarpur ...	281,805	633,786	2,954	24	918,569	8,024	18,495	15	...	26,534	28·47	29·18	5·08	...	28·89	8
9	Jullundur ...	352,329	434,503	1,107	17	787,956	10,124	12,525	1	...	22,650	28·73	28·83	0·90	...	28·74	9
10	Ludhiana ...	176,043	340,261	731	157	517,192	5,412	10,701	9	...	16,122	30·74	31·45	12·31	...	31·17	10
11	Ferozepore ..	408,380	524,056	915	148	933,499	14,963	14,656	8	...	29,627	36·64	27·97	8·74	...	31·74	11
	LAHORE DIVISION.																
12	Lahore ...	619,735	877,928	15,972	4,107	1,017,742	28,124	11,477	599	1	40,201	45·38	30·37	37·50	0·24	39·50	12
13	Amritsar ..	408,571	466,202	4,189	349	879,311	19,200	18,946	152	32	38,330	46·99	40·64	36·29	91·69	43·59	13
14	Gurdaspur ...	407,701	401,628	23,068	164	832,561	15,756	15,238	799	3	31,796	38·65	37·02	34·64	18·29	38·19	14
15	Sialkot ...	599,340	317,942	45,727	270	963,279	26,223	11,697	2,523	86	40,529	43·75	36·79	55·18	318·52	42·07	15
16	Gujranwala ...	622,430	284,773	16,117	99	923,419	35,692	8,600	801	225	45,318	57·34	30·20	49·70	?	49·08	16
	RAWALPINDI DIVISION.																
17	Gujrat ...	650,893	94,171	463	107	745,634	22,268	2,608	11	41	24,928	34·21	27·69	23·76	46·73	33·43	17
18	Shahpur ...	572,565	106,156	8,419	226	687,866	25,433	3,245	308	...	28,986	44·42	30·57	36·58	...	42·17	18
19	Jhelum ...	449,553	54,364	151	127	504,195	14,215	1,447	...	...	15,662	31·62	26·62	...	...	31·06	19
20	Rawalpindi ...	442,090	64,209	932	411	507,642	14,185	2,156	19	4	16,364	32·09	33·60	20·39	9·73	32·24	20
21	Attock ...	470,155	45,071	31	29	515,286	15,176	870	...	120	16,166	32·28	19·30	...	?	31·37	21
22	Mianwali ..	299,971	41,238	91	77	341,377	12,843	1,569	...	3	14,418	42·82	38·05	...	38·96	42·24	22
	MULTAN DIVISION.																
23	Montgomery...	376,174	127,368	459	114	504,115	18,811	5,138	190	18	24,157	50·01	40·34	413·94	157·89	47·92	23
24	Lyallpur ...	547,837	309,021	31,889	148	888,895	18,682	8,741	1,154	6	28,583	34·10	28·29	36·19	40·54	32·16	24
25	Jhang ...	422,468	92,857	177	24	515,526	18,097	3,323	1	4	21,425	42·84	35·79	5·65	166·67	41·56	25
26	Multan ...	660,320	140,359	381	312	801,375	33,016	6,693	33	...	39,742	50·00	47·68	85·94	...	49·59	26
27	Muzaffargarh	494,915	74,481	40	25	569,461	23,447	3,487	...	1	26,935	47·38	46·82	...	40·00	47·29	27
28	Bera Ghazi Khan.	442,234	57,550	25	51	499,860	19,567	3,271	1	22	22,861	44·25	56·84	40·00	431·37	45·73	28
	Total for the Province.	10,729,972	8,434,583	158,078	14,513	19,387,146	442,044	283,828	6,666	571	733,109	41·20	33·65	42·17	39·34*	37·91	

* Figures incorrect due to misclassification.

ANNUAL FORM No. VI.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL
CIRCLES) OF THE PUNJAB DURING THE YEAR 1917.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

1	2	3	4	5	6	7	8	9	10					
Number.	A—RURAL CIRCLES.	Population according to census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AMBALA DIVISION.														
1	Hissar ...	725,016	4	...	15	19,111	305	877	3	5	231	45	1	285
2	Rohtak ...	654,115	...	19	11	12,414	398	1,011	10	29	230	27	1	297
3	Gurgaon ...	675,175	...	164	9	22,105	917	1,343	13	34	285	43	2	377
4	Karnal ...	723,742	2	96	71	13,835	285	1,286	1	6	208	50	10	275
5	Ambala ...	577,034	14	36	1,099	11,935	412	2,964	2	...	109	12	1	124
6	Simla ...	16,036	...	1	...	160	43	100	...	...	...	1	...	1
JULLUNDUR DIVISION.														
7	Kangra ...	760,548	15	1	25	13,563	919	2,462	7	4	205	32	6	254
8	Hoshiarpur ...	864,823	44	...	49	17,473	23	2,540	5	6	211	20	9	251
9	Jullundur ...	691,816	...	40	778	12,883	179	1,558	4	3	193	5	3	208
10	Ludhiana ...	448,172	1	63	662	6,616	86	1,027	4	7	157	6	3	177
11	Ferozepore ...	878,765	1	125	1	16,570	501	1,699	7	1	238	44	4	294
LAHORE DIVISION.														
12	Lahore ...	751,833	46	187	1,564	18,709	226	667	8	6	225	29	6	274
13	Amritsar ...	711,530	13	100	84	19,575	670	1,783	5	6	207	12	5	235
14	Gurdaspur ...	784,343	130	17	568	16,185	1,310	10,756	3	4	204	13	2	226
15	Sialkot ...	855,399	148	10	39	25,233	1,104	4,003	...	1	247	40	7	295
16	Gujranwala ...	831,894	5	5	441	35,655	162	473	1	3	264	105	10	383
RAWALPINDI DIVISION.														
17	Gujrat ...	702,886	54	6	39	17,542	367	1,766	1	4	216	42	6	269
18	Shahpur ...	630,940	...	...	7	21,173	195	718	...	...	221	29	4	254
19	Jhelum ...	481,307	...	...	233	17,755	179	885	1	2	150	38	1	192
20	Rawalpindi ...	459,639	4	3	1,113	8,766	1,671	1,114	4	...	196	35	1	236
21	Attock ...	496,291	...	8	34	12,102	18	935	2	...	156	29	...	187
22	Mianwali ...	316,243	...	13	...	11,900	113	163	...	...	68	7	...	75
MULTAN DIVISION.														
23	Montgomery ...	479,837	...	78	...	19,597	67	95	2	3	170	56	...	231
24	Lyallpur ...	863,900	31	171	26	20,563	490	1,083	5	2	304	34	7	352
25	Jhang ...	475,527	6	1	...	15,483	204	147	2	1	44	34	2	83
26	Multan ...	709,294	54	44	...	30,344	77	80	...	...	111	77	...	188
27	Muzaffargarh ...	547,005	2	30	...	23,908	40	121	2	...	129	77	...	208
28	Dera Ghazi Khan ...	463,304	...	14	...	18,877	222	277	1	6	105	33	1	146
Total of the Rural Circles ...														
		17,576,414	574	1,232	6,868	473,032	11,183	41,933	93	133	5,084	975	92	6,377

No. VI.

(RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1917.

11	12	13								14		15
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.								FROM ALL CAUSES.		Number.
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
4,132	24,729	0·01	...	0·02	26·36	0·42	1·21	0·39	5·70	34·11	28·93	1
5,982	20,132	...	0·03	0·02	18·98	0·61	1·55	0·45	9·15	30·78	29·53	2
10,570	35,485	...	0·24	0·01	32·74	1·36	1·99	0·56	15·66	52·56	32·15	3
6,853	22,703	0·002	0·13	0·10	19·12	0·39	1·78	0·38	9·47	31·37	35·84	4
3,967	20,551	0·02	0·06	1·90	20·68	0·71	5·14	0·21	6·87	35·61	34·01	5
131	436	...	0·06	...	9·98	2·68	6·24	0·06	8·17	27·18	23·26	6
6,220	23,459	0·02	0·001	0·03	17·83	1·21	3·24	0·33	8·18	30·84	29·71	7
4,524	24,904	0·05	...	0·06	20·20	0·03	2·94	0·29	5·23	28·80	31·49	8
4,126	19,772	...	0·06	1·12	18·62	0·26	2·25	0·30	5·96	28·58	32·39	9
5,392	14,024	0·002	0·14	1·48	14·76	0·19	2·29	0·39	12·03	31·27	32·44	10
8,702	27,893	0·001	0·14	0·001	18·86	0·57	1·93	0·33	9·90	31·74	30·59	11
6,865	28,538	0·06	0·25	2·08	24·88	0·30	0·89	0·36	9·13	37·96	31·37	12
5,196	27,656	0·02	0·14	0·12	27·51	0·94	2·51	0·33	7·30	38·87	36·23	13
556	29,748	0·17	0·02	0·72	20·64	1·67	13·71	0·29	0·71	37·93	34·30	14
5,310	36,142	0·17	0·01	0·05	29·50	1·29	4·68	0·34	6·21	42·25	34·93	15
4,440	41,564	0·006	0·006	0·53	42·86	0·19	0·57	0·46	5·34	49·96	36·05	16
3,422	23,465	0·08	0·01	0·06	24·96	0·52	2·51	0·38	4·87	33·38	34·42	17
4,346	26,693	...	...	0·01	33·56	0·31	1·12	0·40	6·89	42·31	26·94	18
2,324	14,568	...	...	0·48	22·35	0·37	1·84	0·40	4·83	30·27	31·83	19
1,369	14,276	0·01	0·01	2·42	19·07	3·64	2·42	0·51	2·98	31·06	37·56	20
2,371	15,655	...	0·02	0·07	24·38	0·04	1·88	0·38	4·78	31·54	31·08	21
1,200	13,464	...	0·04	...	37·63	0·36	0·52	0·24	3·79	42·57	29·24	22
2,907	22,975	...	0·16	...	40·84	0·14	0·20	0·48	6·06	47·88	22·48	23
5,421	23,137	0·04	0·20	0·03	23·80	0·57	1·25	0·41	6·28	32·57	23·98	24
3,724	19,648	0·01	0·002	...	32·56	0·43	0·31	0·17	7·83	41·32	25·46	25
3,980	34,767	0·08	0·06	...	42·78	0·11	0·11	0·26	5·61	49·02	24·26	26
1,358	25,667	0·003	0·05	...	43·71	0·07	0·22	0·38	2·48	46·92	26·95	27
1,220	20,756	...	0·03	...	40·74	0·48	0·60	0·32	2·63	44·80	21·75	28
116,608	657,807	0·03	0·07	0·39	26·91	0·64	2·39	0·36	6·63	37·43	30·82	

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE TOWNS

1	2	3	4	5	6	7	8	9	10					
Number.	B—Towns.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HISSAR DISTRICT.														
1	Hissar	17,162	22	...	...	254	39	97	...	2	7	...	1	10
2	Hansi	14,576	...	1	...	221	40	106	...	...	2	1	...	3
3	Bhiwani	31,100	...	...	1	366	117	145	...	...	17	...	...	17
4	Sirsa	14,629	...	...	...	447	66	51	...	1	3	...	...	4
5	Fattehabad	2,406	...	...	...	17	3	8	...	...	...	...	...	...
ROHTAK DISTRICT.														
6	Rohtak	19,862	...	6	...	335	37	63	...	...	1	3	...	4
7	Jhajjar	10,617	...	1	...	99	43	41	...	...	3	...	...	3
8	Beri	7,798	...	...	...	199	23	12	...	1	3	...	...	4
9	Gohana	5,438	...	...	...	63	9	19	...	...	3	...	...	3
10	Bahadurgarh	4,990	...	...	...	72	14	12	...	...	1	...	...	1
11	Sonepat	12,014	...	2	...	141	16	22	...	1	9	1	...	11
GURGAON DISTRICT.														
12	Rewari	24,780	...	48	1	42	94	149	...	...	3	1	...	4
13	Palwal	9,485	...	1	...	166	49	51	...	...	1	...	...	1
14	Firozpur	5,719	...	9	...	364	41	14	...	...	3	1	...	4
15	Hodal	5,468	...	...	...	151	17	6	...	...	...	...	...	...
16	Ballabgarh	4,053	...	1	...	46	11	13	1	...	...	2	...	3
17	Faridabad	4,487	...	2	...	96	16	15	...	...	1	2	...	3
KARNAL DISTRICT.														
18	Karnal	21,018	...	1	...	369	56	81	...	...	6	1	...	7
19	Kaithal	12,912	...	6	...	223	39	68	1	...	2	1	...	4
20	Panipat	26,342	15	37	...	406	42	122	...	...	8	1	...	9
21	Shahabad	11,054	...	1	68	89	17	66	...	...	2	...	...	2
22	Thanesar	4,719	...	...	...	66	10	24	...	...	2	1	...	3
AMBALA DISTRICT.														
23	Ambala	24,493	54	...	182	471	98	183	1	...	12	...	...	13
24	Jagadhri	12,045	103	6	21	230	61	89	...	...	6	...	...	6
25	Burya	4,272	3	1	19	71	5	19	1	...	1	...	...	2
26	Sadhaura	7,774	...	...	...	82	28	73	1	...	...	...	...	1
27	Rupar	6,935	...	...	...	85	24	38	...	...	2	...	...	2
SIMLA DISTRICT.														
28	Simla	18,934	...	...	...	243	1	117	...	...	12	...	...	12
KANGRA DISTRICT.														
29	Kangra	3,620	...	...	...	13	14	33	...	...	...	...	...	...
30	Dharmasala	2,518	1	...	...	25	5	14	...	...	1	...	...	1
HOSHIARPUR DISTRICT.														
31	Hoshiarpur	15,980	27	...	2	212	2	155	...	...	7	...	...	7
32	Khanpur	2,523	...	...	...	31	1	17	...	...	2	...	...	2
33	Hariana	5,395	3	...	...	72	1	24	...	...	1	1	...	2
34	Garhdiwala	3,093	...	...	...	32	...	6	...	...	1	...	...	1
35	Dasuya	3,597	...	...	...	77	1	31	...	...	2	...	...	2
36	Tanda Umar	7,016	...	...	...	173	1	43	1	...	...	...	...	1
37	Miani	4,870	...	...	...	71	1	11	...	...	3	...	...	3
38	Mukerian	2,053	...	...	...	46	...	22	...	...	3	...	...	3
39	Una	4,178	...	...	1	55	...	7	...	...	2	...	...	2
40	Anandpur	4,041	...	...	...	52	1	6	...	...	4	...	...	4
JULLUNDUR DISTRICT.														
41	Jullundur	55,354	15	...	4	751	133	475	...	...	19	...	1	20
42	Kartarpur	8,631	...	...	13	115	21	58	...	...	4	...	...	4
43	Bungah	4,602	...	...	...	34	10	16	...	...	2	...	...	2
44	Rahon	6,292	...	...	...	139	8	30	...	...	...	...	...	...
45	Phillaur	5,224	...	...	...	78	3	23	1	...	...	...	...	1
46	Nurmahal	7,178	...	...	77	92	13	59	...	...	6	...	...	6
47	Nakodar	8,859	...	4	15	110	18	50	...	...	5	...	...	5

No. VI.—CONTINUED.

OF THE PUNJAB DURING THE YEAR 1917.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										Number.
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diar- rhea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
273	700	1.28	...	...	14.80	2.27	5.65	0.53	16.20	40.79	40.90	1
255	626	...	0.07	...	15.16	2.74	7.27	0.21	17.49	42.95	37.38	2
631	1,277	...	...	0.03	11.77	3.76	4.66	0.55	20.29	41.06	41.99	3
154	722	...	...	...	30.56	4.51	3.49	0.27	10.53	49.35	38.46	4
11	39	...	...	...	7.07	1.25	3.33	...	4.57	16.21	25.10	5
235	680	...	0.30	...	16.87	1.86	3.17	0.20	11.83	34.24	34.31	6
213	400	...	0.09	...	9.32	4.05	3.86	0.28	20.06	37.68	34.35	7
134	372	...	...	...	25.52	2.95	1.54	0.51	17.18	47.70	35.34	8
94	188	...	...	...	11.59	1.66	3.49	0.55	17.29	34.57	51.38	9
65	164	...	...	...	14.43	2.81	2.40	0.20	13.03	32.87	34.31	10
190	362	...	0.17	...	11.74	1.33	1.83	0.92	15.81	31.80	33.89	11
531	819	...	1.94	0.04	1.39	3.79	6.01	0.16	21.43	35.07	25.97	12
184	452	...	0.11	...	17.50	5.17	5.38	0.11	19.40	47.65	49.40	13
102	534	...	1.57	...	63.65	7.17	2.45	0.70	17.84	93.37	31.93	14
109	233	...	...	...	27.62	3.11	1.10	...	19.93	51.76	44.40	15
44	118	...	0.25	...	11.35	2.71	3.21	0.74	10.86	29.11	37.75	16
76	208	...	0.45	...	21.40	3.57	3.34	0.67	16.94	46.36	39.18	17
274	788	...	0.05	...	17.76	2.66	3.85	0.33	13.04	37.49	41.85	18
155	495	...	0.46	...	17.27	3.02	5.27	0.31	12.00	38.34	47.74	19
523	1,154	0.57	1.40	...	15.41	1.59	4.63	0.34	19.86	43.41	46.40	20
153	396	...	0.69	6.15	8.05	1.54	5.97	0.13	13.84	35.82	33.56	21
47	150	...	...	...	13.99	2.12	5.09	0.64	9.96	31.79	39.42	22
208	1,209	2.20	...	7.43	19.23	4.00	7.47	0.53	8.49	49.36	30.64	23
215	731	8.55	0.50	1.74	19.10	5.06	7.39	0.50	17.85	60.69	45.51	24
84	204	0.70	0.23	4.45	16.62	1.17	4.45	0.47	19.66	47.75	40.54	25
78	262	...	...	...	10.55	3.60	9.39	0.13	10.13	33.70	39.85	26
88	237	...	...	...	12.26	3.46	5.43	0.29	12.69	34.17	33.14	27
112	485	...	...	...	12.83	0.05	6.18	0.03	5.92	25.62	19.97	28
35	95	...	...	...	3.59	3.87	9.12	...	9.67	26.24	28.12	29
14	60	0.40	...	...	9.53	1.99	5.56	0.40	5.56	23.83	22.65	30
180	585	1.59	...	0.12	12.47	0.12	9.02	0.41	10.60	34.45	35.22	31
28	79	...	...	...	12.29	0.40	6.74	0.79	11.10	31.31	37.10	32
13	115	0.56	...	...	13.35	0.19	4.5	0.37	2.41	21.32	32.62	33
9	48	...	...	...	10.35	...	1.91	0.32	2.91	15.52	30.33	34
43	154	...	...	...	21.41	0.23	8.62	0.56	11.95	42.81	50.88	35
35	253	...	...	...	24.66	0.14	6.13	0.14	4.99	36.06	31.01	36
29	115	...	...	...	14.53	0.21	2.26	0.62	5.95	22.61	29.12	37
28	99	...	...	...	12.41	...	10.72	1.46	13.64	48.22	55.43	38
30	95	...	...	0.25	13.16	...	1.68	0.48	7.18	22.74	34.18	39
24	87	...	...	...	12.87	0.25	1.48	0.99	5.94	21.53	23.90	40
219	1,617	0.27	...	0.07	13.57	2.40	8.58	0.36	3.93	29.21	35.67	41
49	260	...	...	1.51	13.32	2.43	6.72	0.46	5.69	30.12	40.55	42
30	92	...	...	...	7.39	2.17	3.43	0.43	6.52	19.99	34.38	43
32	209	...	...	...	22.9	1.27	4.77	...	5.09	33.22	31.15	44
57	162	...	...	...	14.93	0.57	4.40	0.19	10.91	31.01	37.29	45
30	277	...	...	10.73	12.82	1.81	8.22	0.84	4.18	38.59	35.55	46
59	261	...	0.45	1.69	12.42	2.03	5.64	0.56	6.66	28.46	33.75	47

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8	9	10					
Number.	B—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LUDHIANA DISTRICT.														
48	Ludhiana	43,152	3	1	2	556	80	245	1	...	14	...	...	15
49	Jagraon	15,039	...	...	1	188	16	71	...	...	10	...	...	10
50	Rackot	7,510	...	...	...	107	4	27	...	...	3	...	1	4
51	Khanna	3,319	...	...	...	27	3	22	...	...	1	...	...	1
FEROZEPORE DISTRICT.														
52	Ferozepore	24,678	...	...	...	316	51	104	...	...	6	...	...	6
53	Zira	4,378	...	3	...	40	4	2	...	...	1	...	...	1
54	Dharmkot	5,859	...	1	...	38	6	22	...	...	2	...	...	2
55	Muktsar	8,834	...	6	...	56	13	22	...	...	3	1	...	4
56	Fazilka	10,985	1	...	...	344	36	67	...	1	4	...	...	5
LAHORE DISTRICT.														
57	Lahore	210,271	87	8	424	5,443	399	1,297	2	2	128	4	2	138
58	Chunian	7,151	...	1	...	190	17	21	1	...	9	...	...	10
59	Khudian	2,992	...	1	...	100	2	3	...	...	...	...	...	...
60	Kasur	24,783	...	...	2	371	34	124	1	...	12	...	1	14
61	Khem Karn	5,732	...	4	...	95	3	24	...	...	2	...	...	3
62	Patti	7,987	...	...	...	194	19	30	...	...	4	...	...	4
63	Baghbanpura Bhogiwal	6,993	8	...	66	301	25	33	...	...	7	...	...	7
AMRITSAR DISTRICT.														
64	Amritsar	151,339	108	16	9	4,533	600	3,776	5	...	98	...	2	105
65	Majitha	5,223	...	...	1	124	24	15	...	...	2	...	...	2
66	Jandiala	6,959	...	...	...	160	7	19	...	...	...	...	...	...
67	Tarn Taran	4,260	...	1	...	75	21	29	...	...	1	...	...	1
GURDASPUR DISTRICT.														
68	Gurdaspur	5,133	...	...	...	113	15	70	...	...	...	...	...	...
69	Dina Nagar	4,154	10	...	1	107	23	57	...	...	1	...	...	1
70	Pathankot	7,007	22	...	43	157	48	119	...	...	2	...	1	3
71	Dalhousie	934	...	...	...	3	2	13	...	...	...	...	...	...
72	Eatala	26,400	1	5	86	475	47	329	...	...	10	...	...	10
73	Dera Nanak	4,556	...	...	...	68	19	35	...	...	1	...	...	1
SIALKOT DISTRICT.														
74	Sialkot	48,595	117	...	1	782	168	405	...	...	14	...	...	14
75	Daska	6,046	...	...	...	86	18	25	...	...	4	1	...	5
76	Jamko	3,542	2	...	...	45	12	17	...	...	1	...	...	1
77	Pasrur	7,564	14	...	...	104	29	70	...	...	3	...	...	3
78	Zaffarwal	3,633	...	...	...	52	30	64	...	...	...	...	1	1
79	Narowal	4,464	...	...	...	112	10	40	...	...	2	...	...	2
80	Sambarial	6,285	...	...	...	185	13	25	...	...	2	...	...	2
81	Sahowala	3,558	1	...	1	99	13	16	...	...	1	...	...	1
82	Begowala	3,768	...	1	...	166	7	17	...	...	2	...	...	2
83	Bhopalwala	3,336	...	...	...	58	10	8	...	...	1	...	...	1
84	Mitranwali	3,183	...	...	...	22	10	45	...	...	1	...	...	1
85	Badomali	2,815	...	...	1	60	5	3	...	...	...	...	...	...
86	Kalaawala	2,915	...	...	...	31	3	41	...	...	...	...	...	...
87	Daud	3,431	...	...	...	86	...	14	...	...	1	...	...	1
88	Chawinda	4,695	...	...	...	52	20	51	...	...	3	...	...	3
GUJRANWALA DISTRICT.														
89	Gujranwala	28,637	13	...	6	791	44	173	...	...	21	...	1	22
90	Wazirabad	17,146	...	...	...	566	22	87	...	...	13	...	...	13
91	Eminabad	5,526	1	...	...	132	5	14	...	...	...	...	...	...
92	Kila Didar Singh	2,210	...	...	...	89	3	10	...	1	...	...	...	1
93	Akalgah	3,943	...	...	...	41	1	15	...	...	...	...	...	...
94	Ramnagar	5,256	...	...	...	136	10	12	...	...	4	...	...	4
95	Sohdara	4,666	...	...	...	201	1	3	...	...	3	...	...	3
96	Haizabad	5,742	...	...	...	252	5	32	...	...	6	...	1	7
97	Khangah Dogran	1,267	...	...	...	22	1	6	...	...	...	...	...	...
98	Pindi Bhattian	3,631	...	4	...	123	3	14	...	...	4	...	...	4
99	Sangla	980	...	...	...	12	...	5	...	...	1	...	...	1
100	Sharakpur	2,482	...	...	85	83	9	10	...	...	...	...	...	...
101	Sbakkot	1,054	...	...	...	25	2	4	...	...	...	...	...	...
102	Chuharkana Mandi	854	...	...	...	39	1	1	...	...	...	...	...	...
103	Nankana Sabib	6,131	...	1	...	42	3	1	...	...	...	...	...	...

No. VI—CONTINUED.

TOWNS OF THE PUNJAB DURING THE YEAR 1917—CONTINUED.

11	12	13										
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		Number.
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
281	1,283	0.07	0.02	0.05	12.88	1.85	5.68	0.25	8.33	29.73	32.97	48
231	517	...	...	0.07	12.50	1.06	4.72	0.67	15.37	34.18	39.01	49
81	223	...	...	...	14.25	0.53	3.60	0.53	10.79	29.69	40.53	50
22	75	...	...	...	8.13	0.90	6.63	0.30	6.63	22.60	48.93	51
209	686	...	...	...	12.90	2.08	4.21	0.24	8.47	27.80	22.87	52
86	136	...	0.69	...	9.14	0.91	0.46	0.23	19.64	31.06	33.94	53
63	132	...	0.17	...	6.49	1.02	3.75	0.34	10.75	22.53	34.92	54
92	193	...	0.68	...	6.34	1.47	2.49	0.45	10.41	21.85	34.48	55
184	587	0.09	...	...	31.32	3.28	6.10	0.46	12.20	53.44	39.49	56
1,541	9,387	0.41	0.04	2.02	25.89	1.10	6.17	0.66	7.23	44.40	38.98	57
114	353	...	0.14	...	26.57	2.38	2.94	1.40	15.94	49.36	38.60	58
23	129	...	0.33	...	33.12	0.67	1.00	...	7.68	43.12	38.00	59
281	826	...	...	0.08	14.97	1.37	5.00	0.16	11.34	33.33	34.98	60
69	188	...	0.70	...	16.57	0.52	4.19	0.35	10.47	32.80	35.07	61
81	328	...	...	...	24.29	2.38	3.76	0.50	10.14	41.07	29.97	62
62	502	1.14	...	9.44	43.04	2.58	4.72	1.00	8.87	71.79	Not available.	63
929	10,076	0.71	0.11	0.06	29.95	3.96	24.95	0.69	6.14	66.58	41.63	64
53	219	...	...	0.19	23.74	4.60	2.87	0.38	10.15	41.93	33.70	65
33	219	...	...	...	22.99	1.01	2.73	...	4.74	31.47	31.81	66
33	160	...	0.23	...	17.61	4.02	6.31	0.23	7.75	37.56	30.33	67
25	223	...	...	...	22.01	2.92	18.64	...	4.87	43.44	35.03	68
21	220	2.41	...	0.24	25.76	5.54	13.72	0.24	5.06	52.96	43.62	69
66	458	3.14	...	6.14	23.41	6.87	16.98	0.43	9.42	65.36	37.71	70
2	20	...	...	...	3.20	2.13	13.86	...	2.13	21.32	26.65	71
43	996	0.04	0.19	3.25	17.97	1.78	12.45	0.38	1.63	37.68	37.68	72
8	131	...	...	...	14.93	4.17	7.68	0.22	1.76	28.75	29.89	73
610	2,157	2.41	...	0.02	16.09	3.46	9.57	0.29	12.55	44.39	37.17	74
62	196	...	...	...	14.22	2.98	4.13	0.83	10.25	32.42	29.11	75
29	106	0.56	...	...	12.70	3.39	4.80	0.28	8.19	29.93	36.36	76
43	263	1.85	...	...	13.75	3.83	9.25	0.40	5.68	34.77	31.99	77
25	172	...	...	...	14.31	8.26	17.62	0.28	6.88	47.34	31.38	78
19	183	...	...	...	25.09	2.24	8.96	0.45	4.26	40.99	37.50	79
40	235	...	...	...	23.44	2.07	3.98	0.32	6.36	42.16	...	80
25	156	0.29	...	0.28	27.82	3.65	4.50	0.28	7.03	43.84	...	81
20	233	...	0.27	...	49.36	1.86	4.51	0.53	5.31	61.84	...	82
24	101	...	...	...	17.39	3.00	2.40	0.30	7.19	30.28	...	83
27	105	...	...	...	6.91	3.14	14.14	0.31	8.48	32.99	...	84
13	82	...	...	0.36	21.31	1.78	1.07	...	4.62	29.13	...	85
16	91	...	...	...	10.63	1.03	14.07	...	5.49	31.22	...	86
36	137	...	...	...	24.71	...	4.02	0.29	10.34	39.36	...	87
14	140	...	...	...	11.06	4.26	10.86	0.64	2.98	29.82	...	88
204	1,253	0.45	...	0.21	27.62	1.54	6.04	0.77	7.12	43.75	39.33	89
97	785	...	...	...	23.01	1.28	5.37	0.76	5.66	45.78	34.01	90
13	170	0.18	...	...	23.89	0.90	2.53	...	3.26	30.76	38.73	91
21	124	...	...	...	40.27	1.36	4.52	0.45	9.50	56.11	38.73	92
10	67	...	...	...	10.40	0.26	3.80	...	2.54	16.99	16.23	93
34	196	...	...	...	25.88	1.90	2.28	0.76	6.47	37.29	39.04	94
12	220	...	...	...	43.08	0.21	0.64	0.64	2.57	47.15	41.19	95
37	333	...	...	...	43.89	0.87	5.57	1.22	6.44	57.99	25.91	96
13	42	...	...	...	17.36	0.79	4.74	...	10.26	33.15	23.20	97
33	181	...	1.10	...	33.87	0.82	3.83	1.1	9.09	49.55	31.23	98
...	18	...	...	...	12.24	...	5.10	1.02	...	18.37	29.39	99
40	227	...	...	18.93	18.52	2.01	2.23	...	8.92	50.65	35.56	100
12	43	...	...	...	23.72	1.90	3.80	...	11.30	40.80	23.34	101
4	45	...	...	...	45.67	1.17	1.17	...	4.68	52.69	...	102
3	50	...	0.16	...	6.85	0.49	0.16	...	0.49	8.16	Not available.	1.3

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE TOWNS

1	2	3	4	5	6	7	8	9	10					
Number.	E—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
1	2	3	4	5	6	7	8	9	Males.	Females.	12	13	14	15
GUJRAT DISTRICT.														
104	Gujrat	18,692	...	...	10	414	38	139	...	...	13	1	...	14
105	Jalalpur	11,615	...	...	...	193	20	91	...	...	7	...	...	7
106	Kunjab	7,090	...	...	...	167	14	33	...	...	2	...	...	2
107	Dinga	5,851	...	...	...	69	4	20	...	...	1	2	...	3
SHAHPUR DISTRICT.														
108	Shahpur	8,739	...	...	...	289	22	29	...	...	1	...	...	1
109	Sahiwal	7,658	...	...	1	83	6	13	...	...	5	...	...	5
110	Bhera	15,202	...	...	2	235	27	68	...	...	5	...	...	5
111	Miani	5,819	...	...	1	138	5	33	...	...	4	...	...	4
112	Khushab	10,159	17	...	...	300	50	69	...	...	8	1	...	9
113	Sargodha	8,819	...	...	...	47	4	11	...	...	1	...	...	1
JHELUM DISTRICT.														
114	Jhelum	12,298	2	...	200	169	20	57	...	...	2	2	...	4
115	Pind Dadan Khan	10,590	4	...	...	354	44	48	...	...	3	...	...	3
RAWALPINDI DISTRICT.														
116	Rawalpindi	46,642	...	...	501	534	118	427	1	...	23	1	...	31
117	Murree	1,361	...	...	...	10	1	11	...	...	...	...	...	...
ATTOCK DISTRICT.														
118	Pindigheb	9,045	...	...	...	187	2	25	...	...	4	...	...	4
119	Hazro	9,950	...	...	...	80	5	34	1	...	3	1	...	6
MIANWALI DISTRICT.														
120	Mianwali	6,224	...	...	...	147	14	12	...	...	...	...	...	...
121	Bhakkar	5,384	...	...	...	187	13	5	...	...	2	...	...	2
122	Isa Khel	6,808	...	...	...	178	55	7	...	...	1	...	...	1
123	Kalabagh	6,651	...	...	...	153	30	7	...	...	1	...	...	1
MONTGOMERY DISTRICT.														
124	Montgomery	8,129	...	...	51	123	6	25	...	...	2	...	...	2
125	Kamalia	8,237	...	...	3	364	2	2	...	...	...	1	...	1
126	Pakpattan	7,912	...	...	1	399	4	4	...	...	...	2	...	2
LYALLPUR DISTRICT.														
127	Lyallpur	19,578	...	1	...	224	22	42	...	...	8	...	...	8
128	Gojra	5,41	...	...	...	39	5	2	...	...	1	...	...	1
JHANG DISTRICT.														
129	Jhang-Maghiana	25,914	3	...	...	597	118	20	...	...	1	1	...	2
130	Chiniot	14,035	...	...	...	253	34	20	...	...	1	...	...	1
MULTAN DISTRICT.														
131	Multan	85,747	118	3	4	2,613	248	373	...	...	...	...	...	...
132	Shujabad	6,334	11	...	...	318	32	23	...	...	...	...	...	...
MUZAFFARGARH DISTRICT.														
133	Muzaffargarh	4,119	2	...	...	121	8	13	...	...	2	...	...	2
134	Khangarh	3,349	...	...	...	204	13	16	...	...	...	...	...	...
135	Alipur	3,212	...	1	...	126	9	8	...	...	3	...	1	4
136	Leiah	8,173	3	...	...	210	10	13	...	...	1	1	...	2
137	Karor	3,503	...	...	...	191	4	14	...	...	...	...	...	...
DERA GHAZI KHAN DISTRICT.														
138	Dera Ghazi Khan	10,853	...	...	...	275	54	57	...	...	2	1	...	3
139	Jampur	6,517	...	...	...	225	38	17	...	...	...	...	...	...
140	Dajal	6,893	...	...	...	486	21	5	1	...	3	1	...	5
141	Rajapur	3,704	...	...	...	352	19	10	...	...	1	...	...	1
142	Kot Mithan	2,589	...	...	...	203	24	9	...	...	1	...	...	1
Total		1,760,732	791	185	1,907	37,780	4,388	12,459	20	9	698	37	13	777
Total for the Province		19,337,146	1,365	1,417	8,775	510,812	15,571	54,892	113	142	5,782	1,012	105	7,154

No. VI--CONCLUDED.

OF THE PUNJAB DURING THE YEAR 1917--CONCLUDED.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										Number.
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
117 52 31 25	732 863 247 121	... ... ... ...	... ... ... ...	0.53	22.15 16.62 23.55 12.89	2.03 1.72 1.97 0.75	7.44 7.83 4.65 3.74	0.75 0.60 0.28 0.56	6.26 4.48 4.37 4.67	39.16 31.25 34.84 22.61	37.41 33.44 36.45 27.47	104 105 106 107
89 113 172 54 170 29	374 468 509 235 615 92	... ... ... ... 1.67 ...	... ... ... ... ... ...	... ... 0.13 0.13 0.17 ...	27.35 43.09 15.46 23.72 29.53 5.31	2.52 0.78 1.78 0.86 4.92 0.45	2.63 1.70 4.47 5.67 6.79 1.24	0.11 0.65 0.33 0.69 0.89 0.11	10.18 14.76 11.31 9.28 16.74 3.28	42.80 61.11 33.48 40.39 60.54 10.40	19.09 30.61 35.25 40.38 39.63 Not available.	108 109 110 111 112 113
84 105	536 553	0.16 0.38	... ...	16.26 ...	13.74 33.43	1.83 4.15	4.63 4.53	0.33 0.28	6.83 9.92	43.58 52.39	30.57 35.81	114 115
422 8	2,063 25	... ...	... ...	10.74 ...	12.09 7.35	2.53 0.73	9.15 8.08	0.66 ...	9.05 2.20	44.23 13.37	40.83 34.24	116 117
63 97	281 230	... ...	... ...	... ...	26.67 8.94	0.22 0.50	2.76 3.42	0.44 0.50	6.97 9.75	31.07 23.12	33.57 26.01	118 119
22 55 23 42	195 262 264 223	... ... ... ...	... ... ... ...	... ... ... ...	23.62 34.71 25.92 22.99	2.25 2.41 8.01 4.51	1.93 0.93 1.02 1.05	... 0.37 0.15 0.15	3.53 10.21 3.35 6.31	31.33 48.63 38.44 35.02	25.45 37.82 26.97 34.78	120 121 122 123
39 96 58	246 468 468	... ... ...	... ... ...	6.27 0.36 0.13	15.13 44.19 50.43	0.74 0.24 0.51	3.08 0.24 0.51	0.25 0.12 0.25	4.80 11.65 7.33	30.26 56.82 59.15	20.81 36.40 33.16	124 125 126
90 12	387 59	... ...	0.05 ...	... ...	11.44 7.20	1.12 0.92	2.15 0.37	0.41 0.18	4.60 2.22	19.77 10.89	13.15 Not available.	127 128
447 282	1,157 590	0.12 ...	... ...	... ...	23.04 17.96	4.55 2.41	0.77 1.42	0.08 0.07	17.25 20.02	45.81 41.89	37.45 40.43	129 130
1,157 75	4,516 459	1.33 1.74	0.04 ...	0.05 ...	30.46 50.21	2.89 5.05	4.35 3.63	... ...	13.50 11.84	52.67 72.47	32.23 34.67	131 132
16 49 90 76 58	162 282 233 319 267	0.49 0.37 ...	... ... 0.30 ... ...	... ... ... ... ...	29.33 60.91 33.04 25.69 54.52	1.24 3.83 2.72 1.22 1.14	3.16 4.78 2.42 2.20 4.00	0.49 ... 1.21 0.24 ...	3.83 14.63 27.17 9.30 16.56	39.33 84.20 71.86 39.03 76.22	29.13 42.40 36.59 32.69 44.70	133 134 135 136 137
112 87 43 39 19	501 367 560 421 256	... ... ... ... ...	... ... ... ... ...	... ... ... ... ...	16.32 31.53 70.51 95.03 78.41	3.20 5.83 3.05 5.13 9.27	3.38 2.61 0.73 2.70 3.48	0.18 ... 0.73 0.27 0.39	6.65 13.35 6.24 10.53 7.34	29.73 56.31 81.24 113.66 98.88	21.17 28.42 32.70 31.91 31.82	138 139 140 141 142
17,015	75,302	0.45	0.11	1.08	21.46	2.49	7.08	0.44	9.66	42.77	34.59	
133,623	733,109	0.07	0.07	0.45	26.42	0.80	2.81	0.37	6.91	37.91	31.16	

APPENDIX TO ANNUAL FORM NO. VI-B.

BIRTHS AND DEATHS REGISTERED IN THE CANTONMENTS OF THE PUNJAB DURING THE YEAR 1917.

Number.	Cantonments.	Population according to the Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES.					All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.	Total births registered during the year.	Ratio of births per 1,000 of population.	Number.
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Total.						
									Males.	Females.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Ambala	54,223	1	...	106	725	48	244	...	1	11	2	14	537	1,675	31	1,452	27	1
2	Kasauli	3,194	...	...	...	44	3	...	...	...	...	11	11	32	90	28	80	25	2
3	Dagshai	2,032	...	...	...	22	1	...	...	...	...	...	...	32	55	27	43	21	3
4	Sabathu	1,847	...	...	...	14	...	1	...	...	...	...	...	6	21	11	34	18	4
5	Jatogh	471	...	...	...	1	1	...	...	...	1	...	1	9	12	25	10	21	5
6	Dharmasala	3,700	...	...	...	20	1	...	...	...	...	...	...	15	36	9	96	26	6
7	Jullundur	13,964	1	...	...	183	7	8	1	...	1	...	2	46	247	18	173	12	7
8	Ferozepore	26,158	...	...	...	428	30	88	...	1	5	1	7	289	842	32	850	32	8
9	Lahore	18,416	6	...	10	245	26	111	1	...	1	...	2	103	503	27	231	13	9
10	Amritsar	1,417	...	...	...	38	7	9	...	...	...	...	...	15	69	49	32	23	10
11	Dalhousie	644	...	...	...	2	3	2	...	...	2	...	2	5	14	22	19	30	11
12	Bakloh	3,566	...	...	...	14	...	...	...	...	...	...	...	5	19	5	41	11	12
13	Sialkot	16,274	3	...	...	35	26	88	...	...	4	...	4	72	222	14	265	16	13
14	Jhelum	7,390	1	...	8	11	1	2	...	...	1	...	1	5	29	4	14	2	14
15	Rawalpindi	39,841	...	...	124	313	24	13	...	...	10	...	10	92	576	14	423	11	15
16	Campbellpur	3,357	...	...	...	19	...	...	...	...	...	...	...	15	24	10	58	17	16
17	Murree	344	...	...	8	4	3	...	...	...	...	...	...	20	34	99	18	52	17
18	Attock	630	...	...	...	2	...	...	...	...	...	...	...	2	4	6	2	3	18
19	Multan	13,496	3	...	...	140	...	11	...	...	1	...	1	38	193	14	112	8	19
	Total	210,954	15	...	256	2,260	179	572	2	2	97	14	55	1,338	4,675	22	3,953	19	

ANNUAL FORM No. VII.

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICT OF THE PUNJAB DURING
EACH MONTH OF THE YEAR 1917.

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS

1 Number.	2 DISTRICTS.	3 CIRCLES OF REGISTRATION.		4 VILLAGES.		5 MONTHS.					
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar	27	1	963	1	...	...	...	...	...	...
2	Rohtak	19	...	731	...	...	...	...	...	...	...
3	Gurgaon	24	...	1,367	...	...	...	...	...	...	...
4	Karnal	25	2	1,382	1	...	...	...	...	...	...
5	Ambala	19	5	1,715	5	...	...	...	...	...	...
6	Simla	3	...	23	...	...	...	...	...	...	...
JUL'UNDUR DIVISION.											
7	Kangra	15	5	713	4	...	...	...	...	...	...
8	Hoshiarpur	23	10	2,108	15	...	...	...	...	...	...
9	Jullundur	17	1	1,215	...	...	...	...	...	...	...
10	Ludhiana	14	2	858	1	...	...	...	...	1	...
11	Ferozepore	24	2	1,500	1	1	...	...	...	...	1
LAHORE DIVISION.											
12	Lahore	29	7	1,193	7	...	...	...	...	...	...
13	Amritsar	15	8	1,039	8	...	...	...	...	...	...
14	Gurdaspur	22	8	2,238	14	...	...	...	...	...	...
15	Sialkot	30	12	2,319	13	...	...	...	...	...	...
16	Gujranwala	32	5	1,733	5	...	...	...	...	...	...
RAWALPINDI DIVISION.											
17	Gujrat	15	...	1,326	4	...	...	...	...	...	...
18	Shahpur	23	1	1,054	...	...	...	...	...	...	...
19	Jhelum	14	2	893	...	...	...	...	...	...	...
20	Rawalpindi	14	1	1,177	1	...	...	...	...	...	...
21	Attock	13	...	628	...	...	...	...	...	...	...
22	Mianwali	15	...	396	...	...	...	...	...	...	...
MULTAN DIVISION											
23	Montgomery	31	...	2,438	...	...	...	...	...	...	...
24	Lyallpur	21	2	1,277	5	...	...	...	...	...	...
25	Jhang	13	2	955	1	...	...	...	...	...	...
26	Multan	20	7	1,353	9	...	...	...	...	...	...
27	Muzaffargarh	23	4	860	2	...	...	...	...	...	...
28	Dera Ghazi Khan	23	...	707	...	...	...	...	...	...	...
Total for the Province ...		554	87	34,196	97	1	...	...	...	1	1

No. VII.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
...	...	19	7	...	...	16	10	26	0.04	0.03	0.03	0.20	1
...	...	...	...	...	...	...	...	...	...	...	...	0.23	2
...	...	...	...	...	...	...	...	...	...	...	...	0.23	3
...	2	3	12	...	...	12	5	17	0.03	0.01	0.02	0.32	4
...	76	42	50	6	...	98	76	174	0.27	0.28	0.28	0.12	5
...	...	...	...	...	...	...	...	...	...	...	...	0.06	6
...	2	...	10	4	...	11	5	16	0.03	0.01	0.02	0.30	7
...	12	5	9	48	...	55	19	74	0.11	0.05	0.08	0.13	8
1	...	12	2	...	...	5	10	15	0.01	0.03	0.02	0.23	9
1	...	...	1	1	...	2	2	4	0.01	0.01	0.01	0.41	10
...	...	...	...	...	...	1	1	2	0.001	0.002	0.002	0.78	11
...	25	81	35	...	...	89	52	141	0.15	0.12	0.14	1.37	12
2	9	61	44	5	...	87	34	121	0.18	0.09	0.14	0.62	13
10	5	62	86	...	...	92	71	163	0.20	0.19	0.19	0.11	14
1	9	171	101	...	...	140	142	282	0.26	0.33	0.29	0.28	15
...	...	10	9	...	...	17	2	19	0.03	0.004	0.02	0.22	16
20	...	22	12	...	...	30	24	54	0.07	0.07	0.07	0.52	17
...	...	2	...	15	...	10	7	17	0.03	0.02	0.02	0.07	18
...	...	2	4	...	...	2	4	6	0.01	0.02	0.01	0.03	19
...	...	4	...	...	...	4	...	4	0.01	...	0.01	0.10	20
...	...	...	...	...	...	...	...	...	...	...	...	0.13	21
...	...	...	...	...	...	...	...	...	...	...	...	0.11	22
...	...	...	...	...	...	...	...	...	...	...	...	0.24	23
...	...	14	17	...	...	16	15	31	0.03	0.04	0.04	0.22	24
3	...	...	...	6	...	7	2	9	0.03	0.01	0.02	0.01	25
...	7	115	60	1	...	102	81	183	0.23	0.22	0.23	0.05	26
...	...	3	4	...	...	6	1	7	0.02	0.003	0.01	0.01	27
...	...	...	...	...	...	...	...	...	...	...	...	0.09	28
38	147	628	463	86	...	802	563	1,365	0.08	0.06	0.07	0.30	

DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

1	2				3		4		5							
Number.	DISTRICTS.				CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS							
					Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.	January.	February.	March.	April.	May.	June.	July.	
1	2				3	4	5	6	7	8	9	10	11	12	13	
AMBALA DIVISION.																
1	Hissar	...	...	...	27	1	963	...	...	...	...	1	...	...	...
2	Rohtak	...	...	...	19	10	731	12	1	...	3	2	1	1	2
3	Gurgaon	...	...	...	24	20	1,367	31	...	12	35	32	56	47	25
4	Karnal	...	...	...	25	16	1,382	69	6	8	8	21	31	3	10
5	Ambala	...	...	...	19	10	1,715	20	1	3	3	2	6	5	11
6	Simla	...	...	...	3	1	23	1	...	...	...	...	1	...	...
JULLUNDUR DIVISION.																
7	Kangra	...	...	...	15	1	713	1	...	...	...	...	...	...	...
8	Hoshiarpur	...	...	...	23	...	2,108	...	...	...	...	...	...	...	...
9	Jullundur	...	...	...	17	7	1,215	12	...	...	5	7	5	4	9
10	Ludhiana	...	...	...	14	9	858	50	4	1	6	4	1	6	15
11	Ferozepore	...	...	...	24	11	1,500	52	8	11	4	4	18	19	20
LAHORE DIVISION.																
12	Lahore	...	...	...	29	22	1,193	131	5	1	9	11	14	25	20
13	Amritsar	...	...	...	15	19	1,039	82	4	4	5	6	11	13	13
14	Gurdaspur	...	...	...	22	7	2,238	11	...	...	...	1	2	3	3
15	Sialkot	...	...	...	30	7	2,349	9	1	1	1	3	2	...	2
16	Gujranwala	...	...	...	33	3	1,733	5	...	...	...	1	2	4	2
RAWALPINDI DIVISION.																
17	Gujrat	...	...	...	15	3	1,326	5	...	...	...	1	...	1	2
18	Shahpur	...	...	...	23	...	1,054	...	...	...	...	...	...	...	...
19	Jhelum	...	...	...	14	...	898	...	...	...	...	...	...	...	...
20	Rawalpindi	...	...	...	14	3	1,177	3	...	1	...	1	1	...	...
21	Attock	...	...	...	13	5	628	7	...	4	...	2	...	1	...
22	Mianwali	...	...	...	15	3	396	5	...	...	...	3	3	2	1
MULTAN DIVISION.																
23	Montgomery	...	...	...	21	6	2,438	9	7	6	8	6	4	10	3
24	Lyallpur	...	...	...	21	20	1,277	95	3	10	13	22	29	33	28
25	Jhang	...	...	...	13	1	955	1	...	...	...	...	...	...	...
26	Multan	...	...	...	20	12	1,353	18	2	2	6	3	6	6	9
27	Muzaffargarh	...	...	...	23	9	860	19	...	1	2	6	8	3	5
28	Dera Ghazi Khan	...	...	...	23	5	707	10	4	3	...	3	...	...	2
Total for the Province					...	554	205	34,196	658	46	68	108	142	201	186	182

No. VIII.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

					6			7		8			9	10
					TOTAL.			NUMBER OF DEATHS AMONG CHILDREN.		RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1 000 for previous five years.	Number.
August.	September.	October.	November.	December.	Males.	Females.	Total.	Under one year.	Over one year and under ten years.	Males.	Females.	Total.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
...	...	...	...	...	1	...	1	...	1	0.002	...	0.001	0.81	1
3	1	...	1	13	12	16	28	8	16	0.03	0.05	0.04	0.10	2
9	4	3	2	...	104	121	225	36	166	0.27	0.36	0.31	0.39	3
6	10	9	6	23	70	71	141	39	91	0.16	0.20	0.18	0.25	4
2	2	1	2	5	23	20	43	12	29	0.06	0.07	0.07	0.61	5
...	...	...	...	...	...	1	1	1	...	...	0.08	0.03	0.19	6
1	...	...	...	...	...	1	1	...	...	...	0.002	0.001	0.06	7
...	...	...	...	...	...	...	...	...	...	...	...	...	0.51	8
2	6	6	...	...	22	22	44	8	27	0.05	0.06	0.06	0.83	9
8	10	9	...	...	34	30	64	12	39	0.12	0.13	0.12	0.85	10
7	11	9	16	8	69	66	135	23	79	0.13	0.16	0.14	1.36	11
25	21	29	22	19	80	121	201	43	130	0.14	0.28	0.20	1.56	12
20	12	13	10	6	67	50	117	22	84	0.14	0.13	0.13	0.77	13
2	1	8	...	2	12	10	22	2	17	0.03	0.03	0.03	0.33	14
...	1	...	...	...	4	7	11	2	9	0.01	0.02	0.01	0.77	15
...	...	...	...	1	9	1	10	1	7	0.02	0.002	0.01	0.43	16
1	...	...	1	...	6	...	6	2	2	0.01	...	0.01	1.09	17
...	...	...	...	...	...	...	...	...	...	...	...	...	1.24	18
...	...	...	...	...	...	...	...	...	...	...	...	...	0.87	19
...	...	...	...	...	2	1	3	2	1	0.01	0.004	0.01	0.66	20
...	...	...	1	...	5	3	8	2	6	0.02	0.01	0.02	1.32	21
...	...	1	2	1	5	8	13	4	5	0.03	0.05	0.04	0.29	22
2	5	3	18	6	40	38	78	19	51	0.14	0.17	0.15	1.64	23
8	6	6	8	6	89	83	172	44	111	0.18	0.22	0.19	1.25	24
...	...	...	1	...	1	...	1	...	...	0.004	...	0.001	0.84	25
5	2	2	4	...	29	18	47	11	17	0.07	0.05	0.06	0.37	26
3	2	...	...	1	16	15	31	8	13	0.05	0.06	0.05	0.47	27
1	1	...	...	...	8	6	14	1	10	0.03	0.03	0.03	1.05	82
105	95	99	94	91	708	709	1,417	302	911	0.07	0.08	0.07	0.79	

DEATHS REGISTERED FROM FEVERS IN THE

1	2	3		4		5					
Number.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS					
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar	27	27	963	693	932	823	1,093	1,241	1,217	1,452
2	Rohtak	19	19	731	717	737	553	848	1,061	1,150	1,132
3	Gurgaon	24	24	1,367	1,331	732	547	731	908	997	1,197
4	Karnal	25	25	1,382	1,382	1,287	938	1,158	1,398	1,338	1,317
5	Ambala	19	19	1,715	1,705	920	818	1,138	1,383	1,416	1,180
6	Simla	3	3	23	17	17	12	24	39	61	41
	JULLUNDUR DIVISION.										
7	Kangra	15	15	713	678	1,166	928	1,052	1,211	1,152	1,182
8	Hoshiarpur	23	23	2,108	1,955	1,174	952	1,436	1,683	1,620	1,353
9	Jullundur	17	17	1,215	802	904	737	1,015	1,168	1,155	1,074
10	Ludhiana	14	14	858	714	496	386	471	614	553	542
11	Ferozepore	24	24	1,500	1,453	1,030	822	1,030	1,003	1,062	1,177
	LAHORE DIVISION.										
12	Lahore	29	29	1,193	1,140	1,430	1,052	1,276	1,214	1,344	1,374
13	Amritsar	15	15	1,039	1,029	1,224	938	1,086	1,056	1,244	1,039
14	Gurdaspur	22	22	2,238	1,893	1,53	694	821	875	919	887
15	Sialkot	30	30	2,349	2,218	1,572	1,112	1,144	1,037	1,263	1,100
16	Gujranwala	33	33	1,733	1,733	2,905	1,880	1,633	1,264	1,546	1,435
	RAWALPINDI DIVISION.										
17	Gujrat	15	15	1,326	1,270	1,300	918	954	846	779	801
18	Shahpur	23	23	1,054	1,054	939	744	762	756	815	1,026
19	Jhelum	14	14	898	898	819	661	735	611	630	528
20	Rawalpindi	14	14	1,177	877	1,014	831	875	752	684	609
21	Attock	13	13	628	628	991	791	891	794	651	583
22	Mianwali	15	15	396	396	1,027	800	852	702	762	690
	MULTAN DIVISION.										
23	Montgomery	21	21	2,438	2,325	796	638	630	580	699	638
24	Lyallpur	21	21	1,277	1,249	903	779	1,002	1,034	1,288	1,245
25	Jhang	13	13	955	906	786	720	708	620	697	667
26	Multan	20	20	1,353	1,353	1,923	1,239	1,287	1,122	1,396	1,046
27	Muzaffargarh	23	23	860	686	1,900	1,188	1,173	1,112	1,205	989
28	Dera Ghazi Khan	23	23	707	524	1,448	942	922	856	799	780
	Total for the Province	554	554	34,196	31,606	31,325	23,443	26,797	26,940	28,469	27,064

No. IX.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
1,418	1,041	1,253	3,236	4,255	2,455	10,121	10,295	20,416	23·08	28·10	25·46	17·91	1
921	769	963	1,671	2,038	1,480	6,880	6,443	13,323	17·85	19·56	18·61	15·64	2
971	846	1,132	3,948	6,502	4,459	11,262	11,708	22,970	28·94	44·44	31·50	14·12	3
1,344	1,016	902	1,161	1,738	1,391	7,857	7,131	14,988	17·95	19·69	18·74	19·07	4
1,081	801	797	1,079	1,172	1,089	6,667	6,207	12,874	18·65	22·56	20·35	18·12	5
39	43	40	44	33	10	209	194	403	9·49	14·97	11·52	8·61	6
1,159	1,134	1,395	1,295	1,026	901	6,943	6,658	13,601	17·43	18·08	17·74	17·88	7
1,244	1,235	1,554	2,280	2,100	1,613	9,308	8,986	18,294	18·56	21·55	19·92	18·64	8
1,026	1,087	1,212	1,665	1,753	1,376	7,084	7,118	14,202	16·08	20·49	18·02	14·42	9
536	588	642	843	1,037	786	3,552	3,742	7,494	12·78	16·73	14·49	12·19	10
981	846	1,092	2,262	3,414	2,645	8,985	8,379	17,364	17·25	20·31	18·60	13·52	11
1,893	1,343	1,957	3,998	5,157	3,865	12,866	12,437	25,403	22·80	28·51	24·96	16·08	12
1,170	1,417	2,026	4,633	5,134	3,500	12,346	12,121	24,467	24·91	31·58	27·83	17·88	13
921	995	1,801	3,508	2,849	1,885	8,616	8,492	17,108	18·48	23·17	20·55	14·22	14
1,166	1,257	2,774	6,611	5,340	2,817	13,752	13,441	27,193	25·91	31·08	28·23	15·71	15
1,379	1,394	2,668	8,808	7,801	5,486	20,217	17,992	38,209	39·01	44·41	41·26	20·70	16
921	809	1,403	3,561	3,708	2,325	9,448	8,937	18,385	23·58	25·90	24·66	14·58	17
804	586	1,482	4,666	5,960	3,822	11,245	11,217	22,462	29·84	36·13	32·68	13·53	18
521	489	800	1,723	2,072	1,689	5,740	5,538	11,278	21·89	22·88	22·37	16·51	19
503	476	685	920	1,104	887	4,906	4,434	9,340	18·32	18·48	18·40	20·10	20
582	573	746	1,858	2,211	1,707	6,307	6,071	12,378	23·33	24·79	24·02	19·48	21
510	375	883	1,910	2,379	1,665	6,533	6,332	12,565	24·65	39·21	36·81	21·82	22
463	480	1,048	3,859	6,093	4,559	10,223	10,260	20,483	37·02	45·00	40·63	14·97	23
928	901	1,608	3,767	4,405	2,966	10,338	10,488	20,826	20·53	27·22	23·43	13·57	24
472	460	823	2,287	4,782	3,311	8,085	8,248	16,333	29·17	34·60	31·68	14·96	25
824	770	1,869	6,218	9,034	6,550	16,945	16,830	33,275	38·92	44·62	41·52	18·27	26
776	557	1,337	4,558	5,912	4,073	12,865	11,895	24,760	41·72	45·56	43·48	23·11	27
632	574	892	3,211	5,486	3,676	10,679	9,759	20,418	39·13	42·50	40·85	17·50	28
24,685	22,862	35,894	85,680	104,555	73,098	259,959	250,853	510,812	24·51	28·74	26·42	16·68	

DEATHS REGISTERED FROM DYSENTERY AND DIARRHŒA IN THE

1	2	3		4		5					
Number.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from dysentery and diarrhœa were reported.	Number in each district.	Number from which deaths from dysentery and diarrhœa were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar	27	27	963	201	32	18	26	18	31	49
2	Rohtak	19	19	731	278	20	14	19	30	36	45
3	Gurgaon	24	24	1,367	443	30	18	19	29	68	77
4	Karnal	25	25	1,382	153	21	10	10	30	53	36
5	Ambala	19	19	1,715	321	42	27	45	53	49	52
6	Simla	3	3	23	8	1	...	1	1	1	6
	JULLUNDUR DIVISION.										
7	Kangra	15	15	713	369	37	53	57	85	78	77
8	Hoshiarpur	23	15	2,108	20	1	1	6	1	4	2
9	Jullundur	17	17	1,215	96	14	14	22	47	35	35
10	Ludhiana	14	14	858	86	14	5	6	14	19	15
11	Ferozepore	24	21	1,500	91	36	27	29	29	40	54
	LAHORE DIVISION.										
12	Lahore	29	26	1,193	213	40	40	40	35	42	46
13	Amritsar	15	15	1,039	220	48	26	18	26	46	50
14	Gurdaspur	22	22	2,238	473	50	28	33	51	70	61
15	Sialkot	30	29	2,349	494	65	88	45	60	86	79
16	Gujranwala	33	32	1,733	139	17	8	6	11	16	19
	RAWALPINDI DIVISION.										
17	Gujrat	15	15	1,326	175	22	23	19	18	29	27
18	Shahpur	23	22	1,054	169	17	15	35	20	20	26
19	Jhelum	14	14	893	116	16	13	26	19	22	19
20	Rawalpindi	14	14	1,177	209	142	133	154	109	131	122
21	Attock	13	9	628	14	3	...	...	1	1	3
22	Mianwali	15	14	396	72	19	11	21	10	21	12
	MULTAN DIVISION.										
23	Montgomery	21	19	2,438	30	9	2	5	8	7	1
24	Lyallpur	21	21	1,277	243	35	18	17	67	50	49
25	Jhang	13	13	955	201	15	26	19	28	23	26
26	Multan	20	14	1,353	47	23	6	23	21	20	12
27	Muzaffargarh	23	16	880	21	6	10	8	7	6	1
28	Dera Ghazi Khan	23	21	707	210	30	16	23	31	16	27
	Total for the Province...	554	515	34,196	5,112	805	600	737	859	1,020	1,019

No. X.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
46	42	53	93	105	57	319	251	570	0·73	0·68	0·71	0·63	1
42	46	66	81	80	61	273	267	540	0·71	0·81	0·76	0·44	2
109	107	106	160	225	197	615	530	1,145	1·58	1·55	1·57	0·79	3
44	44	50	42	70	39	253	196	449	0·53	0·54	0·56	0·49	4
44	46	59	72	73	66	365	263	628	1·02	0·96	0·99	0·79	5
12	11	4	...	3	4	24	20	44	1·09	1·54	1·26	1·38	6
107	98	98	112	71	65	483	450	933	1·23	1·22	1·22	1·00	7
3	1	2	3	...	7	21	10	31	0·01	0·02	0·03	0·06	8
30	52	46	37	31	22	223	162	385	0·51	0·47	0·49	0·53	9
14	10	23	35	13	31	113	76	189	0·38	0·34	0·37	0·47	10
29	30	42	96	110	89	331	230	611	0·64	0·63	0·65	0·46	11
50	56	72	102	105	97	437	288	725	0·75	0·66	0·71	0·63	12
64	92	124	245	365	218	718	604	1,322	1·45	1·57	1·50	0·97	13
71	104	168	378	297	143	801	663	1,464	1·72	1·81	1·76	1·27	14
69	82	174	460	211	83	780	672	1,452	1·47	1·55	1·51	1·20	15
16	29	20	30	53	47	151	121	272	0·29	0·30	0·29	0·28	16
37	32	48	89	48	51	239	204	443	0·60	0·59	0·59	0·48	17
28	25	36	30	21	36	175	134	309	0·46	0·43	0·45	0·33	18
15	18	25	29	24	17	157	86	243	0·60	0·36	0·48	0·39	19
109	132	151	183	250	169	996	794	1,790	3·72	3·31	3·53	3·77	20
...	1	5	6	1	4	14	11	25	0·05	0·04	0·05	0·08	21
12	16	22	31	30	20	112	113	225	0·62	0·70	0·66	0·63	22
7	8	9	6	7	10	45	34	79	0·16	0·15	0·16	0·11	23
37	35	40	54	65	59	293	224	517	0·58	0·58	0·58	0·35	24
10	23	43	32	57	54	195	161	356	0·70	0·68	0·69	0·57	25
11	38	31	39	77	53	199	158	357	0·46	0·43	0·45	0·37	26
2	...	4	14	14	12	50	34	84	0·16	0·13	0·15	0·15	27
13	23	21	36	80	62	203	175	378	0·75	0·77	0·76	0·43	28
1,031	1,201	1,542	2,500	2,436	1,771	8,590	6,981	15,571	0·81	0·80	0·80	0·64	

DEATHS REGISTERED FROM RESPIRATORY DISEASES IN THE

1	2	3		4		5					
Number.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS					
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar	27	27	963	271	148	118	137	131	83	71
2	Rohtak	19	19	731	426	108	73	86	94	72	64
3	Gurgaon	24	24	1,367	548	108	73	138	94	109	86
4	Karnal	25	25	1,382	413	162	104	119	165	132	198
5	Ambala	19	19	1,715	563	377	330	345	302	312	215
6	Simla	3	3	23	11	19	10	19	26	28	16
	JULLUNDUR DIVISION.										
7	Kangra	15	15	713	588	247	269	280	275	159	140
8	Hoshiarpur	23	23	2,108	1,015	282	248	268	287	194	174
9	Jullundur	17	17	1,215	573	218	211	231	176	154	141
10	Ludhiana	14	13	858	351	150	113	143	114	94	83
11	Ferozepore	24	24	1,500	418	168	183	212	169	126	115
	LAHORE DIVISION.										
12	Lahore	29	28	1,193	482	221	175	176	161	148	147
13	Amritsar	15	15	1,039	625	326	259	307	289	291	336
14	Gurdaspur	22	22	2,238	2,173	827	673	759	768	746	645
15	Sialkot	30	30	2,349	1,307	392	345	402	389	361	266
16	Gujranwala	33	33	1,733	331	97	74	94	68	70	61
	RAWALPINDI DIVISION.										
17	Gujrat	15	15	1,326	430	161	144	205	174	151	154
18	Shahpur	23	23	1,054	341	144	115	145	90	59	50
19	Jhelum	14	14	898	425	128	102	112	68	106	72
20	Rawalpindi	14	14	1,177	565	232	196	216	171	110	87
21	Attock	13	13	628	247	135	154	135	84	61	64
22	Mianwali	15	15	396	93	26	21	14	23	13	14
	MULTAN DIVISION.										
23	Montgomery	21	21	2,438	63	13	21	15	7	10	4
24	Lyallpur	21	20	1,277	511	100	99	118	118	100	83
25	Jhang	13	13	955	139	...	...	...	42	29	18
26	Multan	20	15	1,353	29	44	28	45	37	39	32
27	Muzaffargarh	23	22	860	81	41	25	19	18	4	5
28	Dera Ghazi Khan	23	22	707	219	56	27	38	27	19	26
	Total for the Province ...	554	544	34,196	13,238	4,930	4,190	4,783	4,367	3,780	3,367

No. XI.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
80	67	52	118	123	151	676	608	1,284	1.54	1.66	1.60	1.37	1
80	85	74	138	143	163	630	550	1,180	1.63	1.67	1.65	1.83	2
77	52	82	182	300	290	824	767	1,591	2.12	2.26	2.18	2.13	3
150	91	126	95	170	135	874	773	1,647	2.00	2.13	2.06	2.02	4
148	162	207	244	342	382	1,787	1,579	3,366	5.10	5.74	5.32	3.74	5
10	16	11	27	13	22	133	84	217	6.04	6.48	6.21	4.15	6
165	169	200	204	200	201	1,360	1,149	2,509	3.41	3.12	3.27	3.10	7
164	177	250	306	263	249	1,656	1,206	2,862	3.30	2.89	3.12	2.44	8
172	164	234	212	203	153	1,264	1,005	2,269	2.87	2.89	2.88	4.27	9
83	88	92	142	114	171	773	619	1,392	2.63	2.77	2.69	2.55	10
125	122	111	171	213	201	1,033	883	1,916	1.98	2.14	2.05	1.75	11
133	102	136	175	244	381	1,249	950	2,199	2.15	2.18	2.16	1.86	12
316	371	655	1,025	865	582	2,770	2,852	5,622	5.59	7.43	6.39	3.82	13
674	770	1,208	1,749	1,465	1,095	6,093	5,286	11,379	13.07	14.43	13.67	10.76	14
297	320	498	746	507	381	2,727	2,177	4,904	5.14	5.03	5.09	4.51	15
68	56	64	77	62	69	516	344	860	1.00	0.85	0.93	0.94	16
120	157	185	254	157	187	1,145	904	2,049	2.86	2.62	2.75	2.88	17
55	47	44	53	55	78	572	363	935	1.52	1.17	1.36	1.01	18
83	61	60	54	58	86	580	410	990	2.21	1.69	1.96	1.86	19
49	65	78	77	127	144	968	584	1,552	3.61	2.43	3.06	2.21	20
68	47	73	53	70	50	521	473	994	1.93	1.93	1.93	1.37	21
16	16	14	18	11	8	100	94	194	0.56	0.58	0.57	0.58	22
10	11	9	2	9	15	79	47	126	0.29	0.21	0.25	0.31	23
68	67	73	84	113	104	641	486	1,127	1.27	1.26	1.27	0.87	24
16	13	6	19	34	10	104	83	187	0.38	0.35	0.36	1.04	25
44	41	42	53	30	41	219	257	476	0.50	0.70	0.59	0.04	26
7	2	15	22	15	17	106	84	190	0.34	0.32	0.33	0.18	27
10	25	35	52	28	32	210	165	375	0.77	0.73	0.75	0.47	28
3,288	3,364	4,634	6,352	5,939	5,398	29,610	24,782	54,392	2.79	2.84	2.81	2.38	

DEATHS REGISTERED FROM PLAGUE IN THE

1	2	3		4		5					
Number.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS					
		Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar	27	2	963	1	...	...	...	...	...	...
2	Rohtak	19	1	731	1	...	...	...	...	...	...
3	Gurgaon	24	3	1,367	2	...	...	1	...	8	...
4	Karnal	25	3	1,382	8	17	1	3	15	60	33
5	Amabla	19	7	1,715	59	51	105	275	323	363	117
6	Simla	3	..	23	...	...	...	...	...	...	..
JULLUNDUR DIVISION.											
7	Kangra	15	2	713	4	...	...	11	...	...	4
8	Hoshiarpur	23	5	2,108	11	...	...	3	...	3	...
9	Jullundur	17	9	1,215	43	13	17	43	62	100	52
10	Ludhiana	14	8	858	50	11	19	25	68	74	41
11	Ferozepore	24	1	1,500	1	...	...	..	1	...	...
LAHORE DIVISION.											
12	Lahore	29	16	1,193	111	9	15	49	150	302	238
13	Amritsar	15	7	1,039	9	...	4	8	16	23	4
14	Gurdaspur	22	9	2,238	41	29	69	56	120	132	78
15	Sialkot	30	8	2,349	12	6	9	5	3	6	3
16	Gujranwala	33	8	1,733	35	2	1	31	77	159	73
RAWALPINDI DIVISION.											
17	Gujrat	15	3	1,326	23	6	1	9	15	6	4
18	Shahpur	23	6	1,054	4	...	...	2	1	4	2
19	Jhelum	14	3	898	31	12	21	48	90	150	41
20	Rawalpindi	14	11	1,177	109	10	20	8	49	42	35
21	Attock	13	5	628	8	...	...	...	...	5	4
22	Mianwali	15	...	326	...	...	...	...	...	...	...
MULTAN DIVISION.											
23	Montgomery	21	3	2,438	...	...	...	...	...	...	...
24	Lyallpur	21	1	1,277	1	...	...	...	4	18	4
25	Jhang	13	...	955	...	...	...	...	...	...	...
26	Multan	20	1	1,353	...	...	...	...	...	...	...
27	Muzaffargarh	23	..	860	...	...	...	...	...	...	...
28	Dera Ghazi Khan	23	...	707	...	...	...	...	...	..	...
Total for the Province ...		554	127	34,196	564	166	282	577	994	1,460	783

No. XII.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1917.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
...	...	1	...	...	15	7	9	16	0.02	0.02	0.02	1.64	1
...	...	...	..	...	11	4	7	11	0.01	0.02	0.02	1.93	2
...	...	...	...	...	1	6	4	10	0.02	0.01	0.01	2.88	3
2	...	...	...	...	8	72	67	139	0.16	0.19	0.17	3.76	4
14	...	1	5	10	57	677	644	1,321	1.89	2.34	2.09	3.66	5
...	...	...	...	...	...	...	...	...	...	...	...	...	6
1	...	2	3	...	4	9	16	25	0.02	0.04	0.03	0.71	7
...	2	...	...	11	33	35	17	52	0.07	0.04	0.06	4.48	8
5	2	1	4	143	445	423	464	887	0.96	1.34	1.13	6.43	9
4	...	...	3	113	307	330	335	665	1.12	1.50	1.29	5.07	10
...	...	...	...	...	...	1	...	1	0.001	...	0.001	1.25	11
33	...	1	51	379	779	1,085	971	2,056	1.87	2.23	2.02	1.94	12
2	...	1	...	2	29	42	52	94	0.08	0.14	0.11	5.02	13
20	17	11	...	18	148	338	360	698	0.73	0.98	0.84	6.26	4
4	1	3	1	1	...	24	18	42	0.05	0.04	0.04	6.02	15
...	1	...	...	42	146	286	246	532	0.55	0.61	0.53	7.98	16
...	...	1	1	4	2	23	26	49	0.06	0.03	0.07	8.49	17
...	...	1	...	...	1	7	4	11	0.02	0.01	0.02	3.22	18
7	1	14	18	24	7	195	233	433	0.74	0.98	0.86	6.31	19
18	58	134	418	489	333	807	807	1,614	3.51	3.33	3.18	6.69	20
2	...	1	1	3	18	23	11	34	0.09	0.04	0.07	3.50	21
...	...	...	...	...	...	...	...	...	...	...	...	0.001	22
...	...	...	...	11	44	46	9	55	0.17	0.04	0.11	0.33	23
...	...	...	...	...	...	12	14	26	0.02	0.04	0.03	1.28	24
...	...	...	...	...	...	...	...	...	...	...	...	1.35	25
...	...	...	...	...	4	4	...	4	0.01	...	0.004	0.06	26
...	...	...	...	...	...	...	...	...	...	...	...	0.04	27
...	...	...	...	...	...	...	...	...	...	...	...	...	28
112	82	172	505	1,250	2,392	4,456	4,319	8,775	0.42	0.43	0.45	3.43	

MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH

Serial No.	District and Native States.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Hissar	...	...	...	...	...	...	...	...	...	...	...	...
2	Rohtak	...	...	...	...	...	...	...	...	...	...	...	...
3	Gurgaon	...	...	...	...	4	1	...	...	8	8	...	...
4	Karnal	22	17	1	1	3	3	17	15	65	60	32	33
5	Ambala	83	55	199	128	357	298	479	353	415	368	193	117
6	Simla	...	...	...	...	...	...	...	...	...	...	...	...
7	Kangra	...	...	...	...	11	11	...	...	1	...	4	4
8	Hoshiarpur	...	...	...	...	6	3	...	...	4	3	...	...
9	Jullundur	15	13	44	17	126	43	159	62	205	100	103	52
10	Ludhiana	20	11	8	19	45	25	143	68	128	74	83	41
11	Ferozepore	...	...	...	...	...	...	9	1	2	...	...	...
12	Lahore	12	9	29	15	108	49	211	150	492	302	411	288
13	Amritsar	...	...	20	4	18	8	23	16	56	28	1	4
14	Gurdaspur	35	29	79	69	67	56	139	120	143	132	91	78
15	Sialkot	6	6	10	9	13	5	3	3	6	6	3	3
16	Gujranwala	8	2	17	1	23	31	100	77	227	159	92	73
17	Gujrat	7	6	2	1	23	9	20	15	15	6	4	4
18	Shahpur	...	...	...	...	8	2	33	1	32	4	8	2
19	Jhelum	18	12	35	21	86	49	155	91	213	156	68	41
20	Rawalpindi	11	10	26	20	8	8	105	50	85	44	76	36
21	Attock	...	...	...	...	...	...	...	...	7	5	6	4
22	Mianwali	...	...	...	...	...	...	...	...	...	...	...	...
23	Montgomery	...	...	...	...	...	...	...	...	...	...	...	...
24	Lyallpur	...	...	...	...	...	...	22	4	30	18	...	4
25	Jhang	...	...	...	...	2	...	...	...	...	...	...	...
26	Multan	...	...	...	...	...	...	...	...	...	...	...	...
27	Muzaffargarh	...	...	...	...	...	...	...	...	...	...	...	...
28	Dera Ghazi Khan	...	...	...	...	...	...	...	...	...	...	...	...
Total British Districts		237	170	470	305	908	601	1,618	1,026	2,134	1,473	1,175	784
1	Patiala	...	...	11	11	6	6	24	24	50	50	13	13
2	Kapurthala	...	...	...	...	...	...	10	6	21	13	10	19
3	Maler Kotla	...	...	...	...	...	...	...	...	...	...	...	...
4	Jind	39	23	26	24	37	21	49	34	24	26	4	5
5	Kalsia	...	...	...	...	...	...	...	...	...	...	...	...
6	Faridkot	...	...	...	...	...	...	...	...	...	...	...	...
7	Nabha	...	...	...	...	...	...	...	...	...	...	...	...
8	Pataudi	...	...	...	...	...	...	...	...	...	...	...	...
9	Bahawalpur	...	...	...	...	...	...	...	...	...	...	...	...
10	Nalagarh	...	...	...	...	...	...	...	...	...	...	...	...
11	Bilaspur	...	...	...	...	...	...	...	...	...	...	...	...
Total Native States...		39	23	37	35	43	27	83	64	95	89	27	37
GRAND TOTAL		276	193	507	340	951	628	1,701	1,090	2,229	1,562	1,202	821

N.B.—The total deaths during the year in Ambala, Lahore, Jhelum and

No. I.

DISTRICTS AND NATIVE STATES IN THE PUNJAB DURING THE YEAR 1917.

JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		TOTAL.		Serial No.	REMARKS.
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
...	...	..	...	1	1	...	...	...	...	40	15	41	16	1	
...	...	...	...	...	...	...	...	...	...	18	11	18	11	2	
...	...	...	...	...	...	...	...	...	...	1	1	13	10	3	
2	2	...	...	...	...	...	...	...	...	8	8	150	139	4	
14	14	...	...	2	1	12	7	30	13	69	73	1,853	1,427	5	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
1	1	...	...	4	2	5	3	2	...	15	4	43	25	7	
...	...	2	2	...	...	...	...	14	11	34	33	60	52	8	
9	5	2	2	3	1	15	4	216	143	609	445	1,506	887	9	
9	4	...	...	...	...	24	3	246	113	553	307	1,259	665	10	
...	...	...	...	...	...	...	...	...	...	...	...	11	1	11	
34	33	2	...	2	1	73	52	575	387	1,074	780	3,023	2,066	12	
2	2	...	...	1	1	...	...	2	2	30	29	153	94	13	
27	20	21	17	12	11	...	...	23	18	182	148	819	698	14	
8	4	1	1	3	3	2	1	1	1	...	...	56	42	15	
...	...	2	1	...	...	...	...	61	42	128	146	658	532	16	
...	...	...	...	3	1	2	1	8	4	2	2	86	49	17	
...	...	...	...	2	1	...	...	...	...	1	1	84	11	18	
6	7	3	1	22	14	20	18	33	24	11	7	670	441	19	
42	19	114	63	233	155	732	489	727	513	368	339	2,527	1,746	20	
...	2	2	...	4	1	1	1	10	3	16	18	46	34	21	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	22	
...	...	...	...	...	...	...	...	22	11	67	44	89	55	23	
...	...	...	...	...	...	...	...	...	...	...	...	52	26	24	
...	...	...	...	...	...	...	...	...	...	2	...	4	...	25	
...	...	...	...	...	...	...	...	...	...	4	4	4	4	26	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	27	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	
154	113	149	87	292	193	886	579	1,970	1,285	3,232	2,415	13,225	9,031		
2	2	...	...	32	32	...	...	44	44	229	229	411	411	1	
...	...	...	...	...	...	...	...	3	3	104	68	148	109	2	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	
...	...	...	...	...	...	...	...	...	...	...	...	179	133	4	
...	...	...	...	...	...	...	...	...	...	1	1	1	1	5	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
...	...	...	...	...	...	...	...	24	18	21	21	45	39	7	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	
2	2	...	...	32	32	...	...	71	65	355	319	784	693		
156	115	149	87	324	225	886	579	2,041	1,350	3,587	2,734	14,009	9,724		

Rawalpindi 106, 10, 8 and 132, respectively, in cantonments.

